

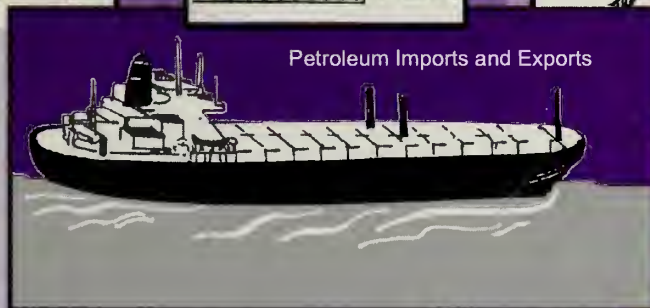
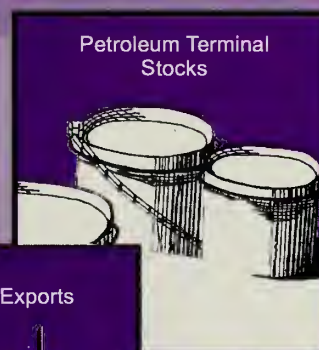
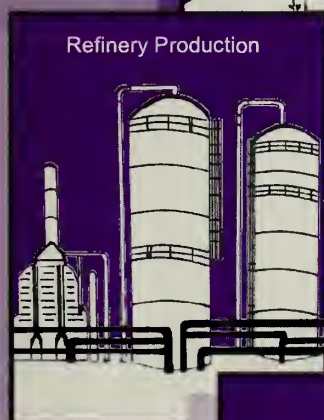
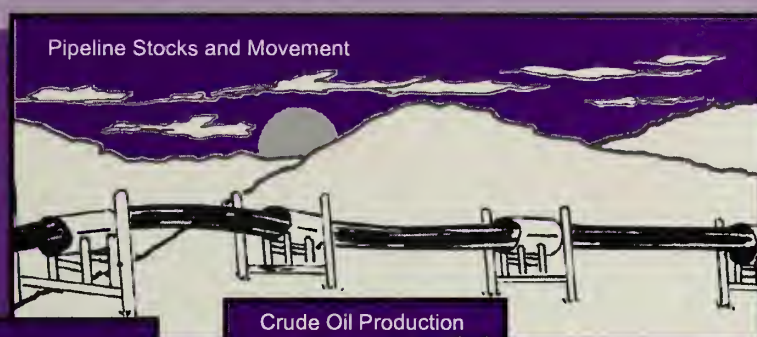
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# Petroleum Supply Annual

## 1999

### Volume 1



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# **Petroleum Supply Annual 1999**

## **Volume 1**

**June 2000**

**Energy Information Administration**  
Office of Oil and Gas  
U.S. Department of Energy  
Washington, DC 20585

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Data from the *Weekly Petroleum Status Report*, *Petroleum Supply Monthly*, and the *Petroleum Supply Annual* publications as well as data from other sources are available electronically on the Energy Information Administration's World Wide Web Site, and the Comprehensive Oil and Gas Information Source (COGIS). The schedule for data release is as follows:

Publications/Sources	Information
<b><i>Weekly Petroleum Status Report</i></b>	
Wednesday 9:00 a.m. (weekly)	Table 1 (U.S. Balance Sheet) and Data Log (Table 14 plus 4-week averages)
Wednesday 5:00 p.m. 6th-12th (monthly)	Table H1 (Petroleum Supply Summary)
<b><i>Winter Fuels Report</i></b> (October through March)	
Wednesday 5:00 p.m. (weekly)	All tables and highlights
<b><i>Propane Data</i></b> (April through September)	
Second Wednesday of the month (9:00 a.m.)	Propane Stocks
<b><i>Petroleum Supply Monthly</i></b>	
23rd-26th (monthly)	Table H1 (Petroleum Supply Summary) and all Summary Statistics and Detailed Statistics Tables
<b><i>Petroleum Supply Annual</i></b>	All tables and data bases
<b><i>Oxygenate Data</i></b>	
15 working days after the report month	Table D1 U.S. Summary Table D2 (Fuel Ethanol Production/Stocks) Table D3 (MTBE Production/Stocks) and Table D4 (MTBE Merchant and Captive)
<b><i>Imports Data</i></b>	
7th-10th (preliminary)	Import data by company from the Form EIA-814, "Monthly Imports Report"
23rd-26th (final)	

COGIS= Comprehensive Oil and Gas Information Source  
WWW = World Wide Web (<http://www.eia.doe.gov>)



# Preface

The *Petroleum Supply Annual* (PSA) contains information on the supply and disposition of crude oil and petroleum products. The publication reflects data that were collected from the petroleum industry during 1999 through annual and monthly surveys. The PSA is divided into two volumes. This first volume contains three sections: Summary Statistics, Detailed Statistics, and Refinery Statistics; each with final annual data. The second volume contains final statistics for each month of 1999, and replaces data previously published in the *Petroleum Supply Monthly* (PSM). The tables in Volumes 1 and 2 are similarly numbered to facilitate comparison between them. Below is a description of each section in Volume 1 of the PSA.

## Summary Statistics

This section contains a summary of the data presented each month in the PSM and in Volume 2 of the PSA. Graphs and tables are provided which show 16 years of data depicting the balance between supply, disposition and ending stocks for various commodities including crude oil, motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, propane/propylene, and liquefied petroleum gases.

## Detailed Statistics

The tables contained in this section provide 1999 detailed statistics on supply and disposition, refinery operations, imports and exports, stocks, and transportation of crude oil and petroleum products. In most cases, the statistics are presented for several geographic areas — the United States (50 States and the District of Columbia), five Petroleum Administration for Defense (PAD) Districts, and 12 Refining Districts. At the U.S. and PAD District level, the total volume and the daily rate of activities are presented.

## Refinery Statistics

The tables contained in this section are compiled from the Form EIA-820 "Annual Refinery Report." Of particular note are listings of refineries and associated crude oil distillation and downstream capacities by State, as of January 1, 2000, as well as summaries of corporate refinery capacities and refinery storage capacities. In addition, refinery receipts of crude oil by method of transportation for 1999 are provided. Also included are fuels consumed at refineries, and lists of shutdowns, sales, reactivations, and mergers during 1999.

## Appendices

Three appendices are provided to assist in understanding and interpreting the data presented in this publication. Industry terminology and product definitions are listed alphabetically in the Glossary.

- Appendix A (District Descriptions and Maps) -Geographic aggregations of the 50 States and the District of Columbia into Refining Districts which make up the PAD Districts.
- Appendix B (Detailed Statistics Explanatory Notes) - Information describing data collection, sources, estimation methodology, data quality control procedures, modifications to reporting requirements and interpretation of tables.
- Appendix C (1998 Revised Crude Oil Production) -Updated monthly and annual crude oil production statistics received after the publication of the 1998 PSA.



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## Summary Statistics



*Incinerators such as this one at a chemical installation turn toxic chemicals into water vapor and other harmless elements.*



**Table S1. Crude Oil and Petroleum Products Overview, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Field Production			Stock Change <sup>a</sup>		Petroleum Products Supplied	Ending Stocks <sup>b</sup> (Million Barrels)
	Total Domestic <sup>c</sup>	Crude Oil	Natural Gas Plant Liquids	Crude Oil <sup>d</sup>	Petroleum Products		Crude Oil <sup>d</sup> and Petroleum Products
1984 Average .....	10,554	8,879	1,630	199	81	15,726	1,556
1985 Average .....	10,636	8,971	1,609	50	-153	15,726	1,519
1986 Average .....	10,289	8,680	1,551	78	124	16,281	1,593
1987 Average .....	10,008	8,349	1,595	128	-87	16,665	1,607
1988 Average .....	9,818	8,140	1,625	1	-29	17,283	1,597
1989 Average .....	9,219	7,613	1,546	86	-129	17,325	1,581
1990 Average .....	8,994	7,355	1,559	-35	142	16,988	1,621
1991 Average .....	9,168	7,417	1,659	-42	32	16,714	1,617
1992 Average .....	8,996	7,171	1,697	-1	-68	17,033	<sup>9</sup> 1,592
1993 Average .....	8,836	6,847	1,736	81	70	17,237	1,647
1994 Average .....	8,645	6,662	1,727	18	-2	17,718	1,653
1995 Average .....	8,626	6,560	1,762	-93	-153	17,725	1,563
1996 Average .....	8,607	6,465	1,830	-124	-28	18,309	1,507
1997 January .....	8,470	6,402	1,782	462	-679	18,554	1,501
February .....	8,708	6,514	1,867	-122	-557	18,398	1,482
March .....	8,646	6,452	1,876	520	444	17,863	1,512
April .....	8,604	6,441	1,824	197	4	18,559	1,518
May .....	8,633	6,474	1,822	230	1,172	18,293	1,561
June .....	8,610	6,442	1,827	-199	658	18,617	1,575
July .....	8,608	6,409	1,821	-343	-167	19,107	1,559
August .....	8,535	6,347	1,831	-283	643	18,565	1,570
September .....	8,679	6,486	1,845	95	642	18,562	1,592
October .....	8,624	6,467	1,813	393	-214	19,071	1,598
November .....	8,565	6,459	1,728	252	-195	18,578	1,600
December .....	8,662	6,531	1,773	-608	-675	19,250	1,560
Average .....	8,611	6,452	1,817	51	93	18,620	—
1998 January .....	8,781	6,541	1,805	389	-66	18,362	1,570
February .....	8,731	6,476	1,857	37	-79	18,316	1,569
March .....	8,590	6,408	1,853	538	54	18,685	1,587
April .....	8,685	6,483	1,869	556	349	19,044	1,614
May .....	8,529	6,347	1,835	-9	1,232	18,375	1,652
June .....	8,460	6,267	1,748	-620	577	19,182	1,651
July .....	8,155	6,194	1,586	187	162	19,466	1,661
August .....	8,301	6,203	1,722	-293	530	19,347	1,669
September .....	7,878	5,789	1,716	-641	95	18,895	1,652
October .....	8,257	6,143	1,744	677	-776	19,188	1,649
November .....	8,294	6,140	1,768	321	425	18,673	1,672
December .....	8,066	6,043	1,620	-285	-515	19,419	1,647
Average .....	8,392	6,252	1,759	74	165	18,917	—
1999 January .....	8,001	5,963	1,656	297	-454	19,029	1,642
February .....	8,068	5,966	1,722	50	-291	19,107	1,635
March .....	8,023	5,883	1,787	367	-859	19,497	1,620
April .....	8,015	5,887	1,806	-301	433	19,152	1,624
May .....	8,091	5,875	1,790	182	897	18,705	1,658
June .....	7,997	5,760	1,874	-235	-273	19,836	1,642
July .....	8,013	5,798	1,902	34	10	19,820	1,644
August .....	8,069	5,780	1,874	-566	-145	20,093	1,622
September .....	8,127	5,804	1,917	-368	142	19,483	1,615
October .....	8,283	5,947	1,953	-85	-875	19,868	1,585
November .....	8,275	5,960	1,949	-297	-188	19,087	1,571
December .....	8,320	5,959	1,957	-507	-1,995	20,498	1,493
Average .....	8,107	5,881	1,850	-118	-304	19,519	—

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are totals as of end of period.

<sup>c</sup> Includes crude oil, natural gas plant liquids, and other liquids. Beginning in 1993, fuel ethanol blended into finished motor gasoline and oxygenate production from merchant MTBE plants are also included.

<sup>d</sup> Includes stocks located in the Strategic Petroleum Reserve.

<sup>e</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>f</sup> Net Imports equal Imports minus Exports.

<sup>9</sup> In January 1993, bulk terminal, pipeline, and merchant-producer stocks of oxygenates were added to surveys affecting stock levels and stock change calculations. See Summary Statistics Explanatory Note 2.

Footnotes continued on following page.



**Table S1. Crude Oil and Petroleum Products Overview, 1984 - Present (Continued)**  
(Thousand Barrels per Day, Except Where Noted)

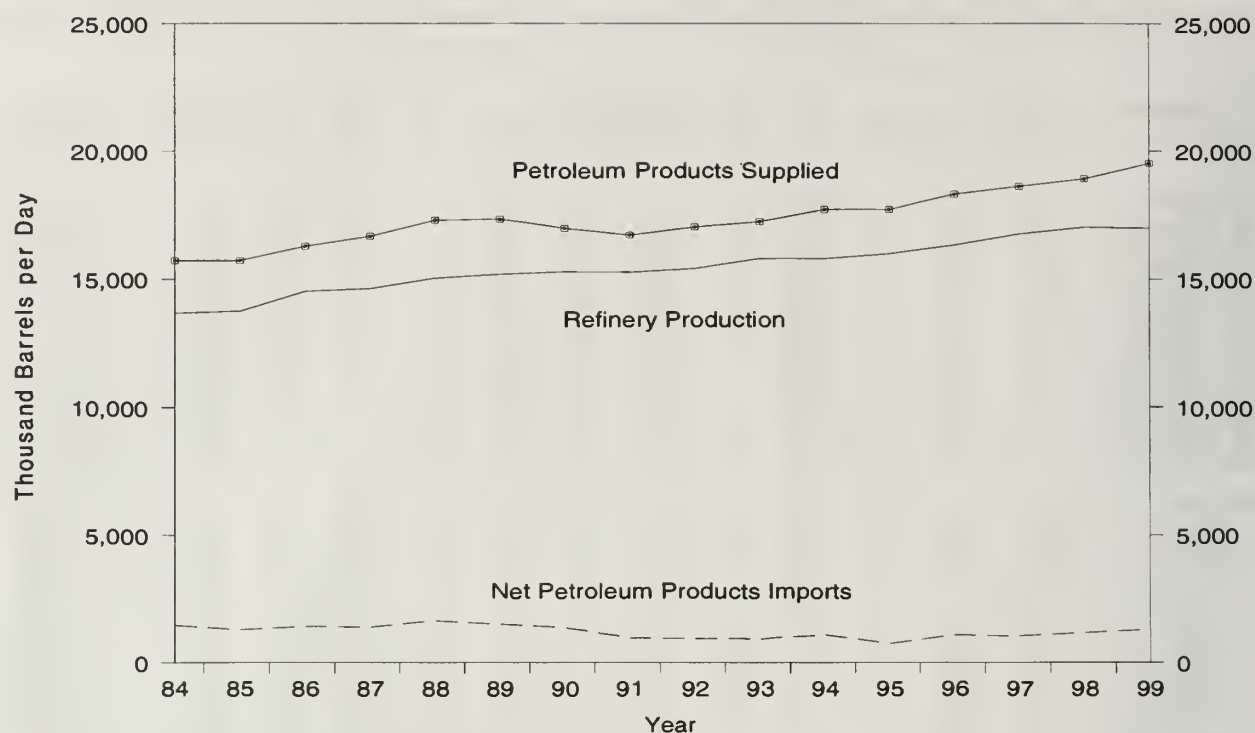
Year/Month	Imports			Exports			Net Imports <sup>f</sup>
	Total	Crude Oil <sup>e</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	
1984 Average .....	5,437	3,426	2,011	722	181	541	4,715
1985 Average .....	5,067	3,201	1,866	781	204	577	4,286
1986 Average .....	6,224	4,178	2,045	785	154	631	5,439
1987 Average .....	6,678	4,674	2,004	764	151	613	5,914
1988 Average .....	7,402	5,107	2,295	815	155	661	6,587
1989 Average .....	8,061	5,843	2,217	859	142	717	7,202
1990 Average .....	8,018	5,894	2,123	857	109	748	7,161
1991 Average .....	7,627	5,782	1,844	1,001	116	885	6,626
1992 Average .....	7,888	6,083	1,805	950	89	861	6,938
1993 Average .....	8,620	6,787	1,833	1,003	98	904	7,618
1994 Average .....	8,996	7,063	1,933	942	99	843	8,054
1995 Average .....	8,835	7,230	1,605	949	95	855	7,886
1996 Average .....	9,478	7,508	1,971	981	110	871	8,498
1997 January .....	9,763	7,492	2,271	1,038	141	897	8,725
February .....	9,561	7,434	2,127	1,017	229	787	8,544
March .....	9,833	7,754	2,079	933	136	796	8,900
April .....	10,114	7,987	2,127	937	92	845	9,177
May .....	10,818	8,653	2,165	876	26	851	9,941
June .....	10,736	8,759	1,978	955	57	898	9,782
July .....	10,008	8,178	1,830	1,012	70	942	8,996
August .....	10,465	8,621	1,844	1,074	110	964	9,390
September .....	10,537	8,840	1,697	997	122	875	9,540
October .....	10,792	8,927	1,865	1,066	152	914	9,726
November .....	9,948	8,366	1,582	934	32	901	9,014
December .....	9,328	7,653	1,675	1,197	131	1,066	8,130
Average .....	10,162	8,225	1,936	1,003	108	896	9,158
1998 January .....	10,127	8,339	1,788	1,133	231	902	8,994
February .....	9,991	8,045	1,946	1,003	197	806	8,988
March .....	10,034	8,124	1,911	948	99	848	9,087
April .....	11,105	8,985	2,120	1,048	163	885	10,057
May .....	11,104	8,987	2,117	1,053	144	909	10,051
June .....	10,926	8,795	2,132	987	63	924	9,939
July .....	11,649	9,507	2,142	998	104	894	10,651
August .....	11,032	9,177	1,855	780	51	729	10,252
September .....	10,499	8,500	1,998	863	34	828	9,636
October .....	10,861	8,667	2,194	851	87	763	10,011
November .....	10,860	8,940	1,920	782	60	721	10,078
December .....	10,258	8,352	1,906	893	90	803	9,365
Average .....	10,708	8,706	2,002	945	110	835	9,764
1999 January .....	10,424	8,393	2,031	896	107	788	9,529
February .....	10,650	8,468	2,182	756	119	636	9,894
March .....	10,658	8,739	1,919	764	95	669	9,894
April .....	11,618	9,256	2,362	1,196	332	864	10,422
May .....	11,511	9,098	2,412	915	88	826	10,596
June .....	11,160	8,888	2,272	907	123	784	10,253
July .....	11,697	9,391	2,306	918	120	798	10,779
August .....	11,142	8,908	2,234	902	132	769	10,240
September .....	10,657	8,527	2,130	889	27	862	9,768
October .....	10,595	8,613	1,983	944	56	888	9,651
November .....	10,033	8,224	1,809	950	83	866	9,083
December .....	10,065	8,234	1,830	1,230	133	1,096	8,835
Average .....	10,852	8,731	2,122	940	118	822	9,912

Footnotes continued.

Notes: • Crude oil includes lease condensate. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

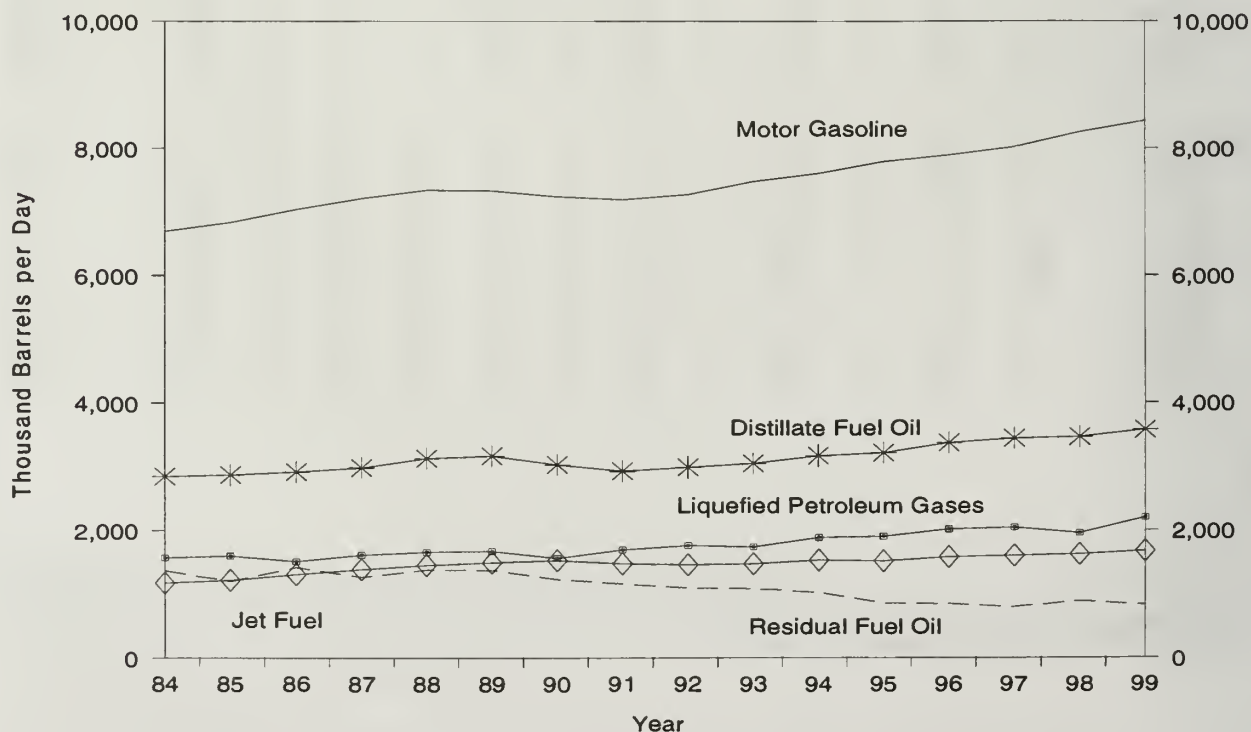
Source: See Summary Statistics Table and Figure Sources.

Figure S1. Petroleum Overview, 1984 - Present



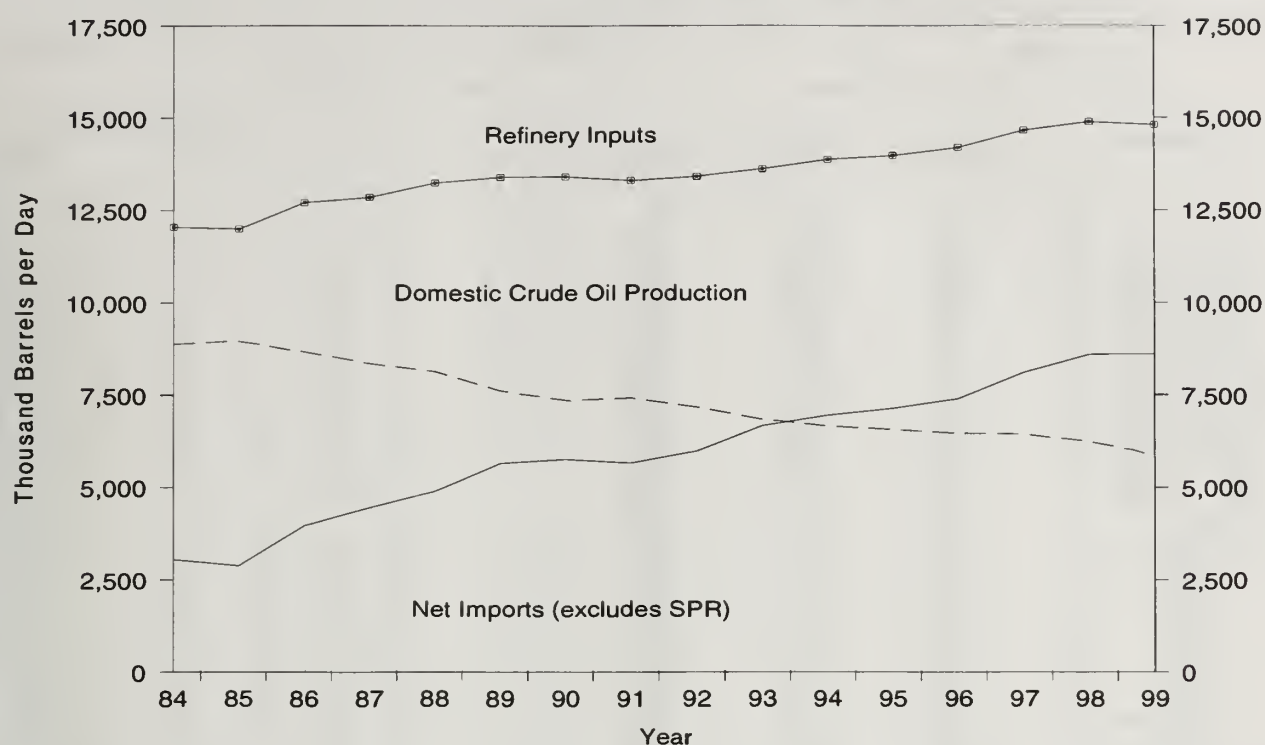
Source: Energy Information Administration, *Petroleum Supply Annual*, Table S1. See Summary Statistics Table and Figure Sources.

Figure S2. Petroleum Products Supplied, 1984 - Present



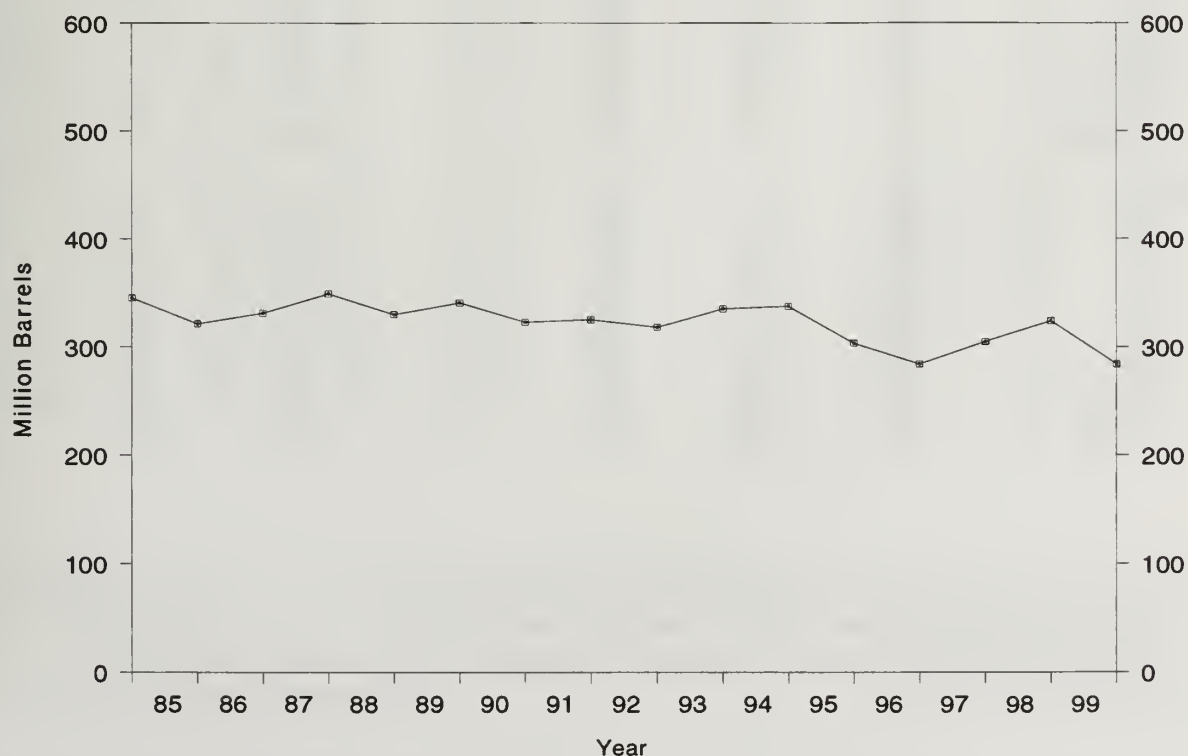
Source: Energy Information Administration, *Petroleum Supply Annual*, Tables S4 - S8. See Summary Statistics Table and Figure Sources.

Figure S3. Crude Oil Supply and Disposition, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S2. See Summary Statistics Table and Figure Sources.

Figure S4. Crude Oil Ending Stocks,<sup>1</sup> 1984 - Present



<sup>1</sup>Excludes stocks held in the Strategic Petroleum Reserve (SPR).

Source: Energy Information Administration, *Petroleum Supply Annual*, Table S2. See Summary Statistics Table and Figure Sources.



**Table S2. Crude Oil Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply						Disposition
	Field Production		Imports			Unaccounted for Crude Oil <sup>a</sup>	Crude Losses
	Total Domestic	Alaskan	Total	SPR	Other		
1984 Average .....	8,879	1,722	3,426	197	3,229	185	2
1985 Average .....	8,971	1,825	3,201	118	3,083	145	1
1986 Average .....	8,680	1,867	4,178	48	4,130	139	(s)
1987 Average .....	8,349	1,962	4,674	73	4,601	145	(s)
1988 Average .....	8,140	2,017	5,107	51	5,055	196	(s)
1989 Average .....	7,613	1,874	5,843	56	5,787	200	(s)
1990 Average .....	7,355	1,773	5,894	27	5,867	258	(s)
1991 Average .....	7,417	1,798	5,782	0	5,782	195	(s)
1992 Average .....	7,171	1,714	6,083	10	6,073	258	(s)
1993 Average .....	6,847	1,582	6,787	15	6,772	168	(s)
1994 Average .....	6,662	1,559	7,063	12	7,051	266	(s)
1995 Average .....	6,560	1,484	7,230	0	7,230	193	(s)
1996 Average .....	6,465	1,393	7,508	0	7,508	215	(s)
1997 January .....	6,402	1,380	7,492	0	7,492	378	0
February .....	6,514	1,384	7,434	0	7,434	-350	0
March .....	6,452	1,331	7,754	0	7,754	501	0
April .....	6,441	1,330	7,987	0	7,987	167	0
May .....	6,474	1,303	8,653	0	8,653	257	0
June .....	6,442	1,260	8,759	0	8,759	-170	0
July .....	6,409	1,238	8,178	0	8,178	136	0
August .....	6,347	1,200	8,621	0	8,621	130	0
September .....	6,486	1,276	8,840	0	8,840	199	0
October .....	6,467	1,286	8,927	0	8,927	5	0
November .....	6,459	1,278	8,366	0	8,366	164	0
December .....	6,531	1,290	7,653	0	7,653	267	0
Average .....	6,452	1,296	8,225	0	8,225	145	0
1998 January .....	6,541	1,229	8,339	0	8,339	60	0
February .....	6,476	1,238	8,045	0	8,045	-264	0
March .....	6,408	1,221	8,124	0	8,124	745	0
April .....	6,483	1,200	8,985	0	8,985	336	0
May .....	6,347	1,173	8,987	0	8,987	122	0
June .....	6,267	1,135	8,795	0	8,795	-135	0
July .....	6,194	1,155	9,507	0	9,507	144	(s)
August .....	6,203	1,133	9,177	0	9,177	96	0
September .....	5,789	1,093	8,500	0	8,500	-44	(s)
October .....	6,143	1,197	8,667	0	8,667	-52	(s)
November .....	6,140	1,168	8,940	0	8,940	74	0
December .....	6,043	1,160	8,352	0	8,352	250	0
Average .....	6,252	1,175	8,706	0	8,706	115	(s)
1999 January .....	5,963	1,164	8,393	0	8,393	490	0
February .....	5,966	1,104	8,468	0	8,468	45	(s)
March .....	5,883	1,134	8,739	0	8,739	338	(s)
April .....	5,887	1,056	9,256	0	9,256	-18	0
May .....	5,875	1,088	9,098	0	9,098	270	0
June .....	5,760	967	8,888	0	8,888	198	0
July .....	5,798	990	9,391	0	9,391	202	0
August .....	5,780	1,011	8,908	31	8,877	177	0
September .....	5,804	933	8,527	17	8,509	436	0
October .....	5,947	1,068	8,613	17	8,595	(s)	0
November .....	5,960	1,023	8,224	17	8,207	306	0
December .....	5,959	1,058	8,234	16	8,218	-156	0
Average .....	5,881	1,050	8,731	8	8,722	191	(s)

<sup>a</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>c</sup> Stocks are totals as of end of period.

<sup>d</sup> Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

Footnotes continued on following page.

**Table S2. Crude Oil Supply and Disposition, 1984 - Present (Continued)**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Disposition					Ending Stocks <sup>c</sup> (Million Barrels)		
	Stock Change <sup>b</sup>		Refinery Inputs	Exports	Product Supplied	Total	SPR <sup>d</sup>	Other Primary
	SPR	Other						
1984 Average .....	195	4	12,044	181	64	796	451	345
1985 Average .....	117	-67	12,002	204	60	814	493	321
1986 Average .....	50	28	12,716	154	49	843	512	331
1987 Average .....	80	49	12,854	151	34	890	541	349
1988 Average .....	52	-51	13,246	155	40	890	560	330
1989 Average .....	56	30	13,401	142	28	921	580	341
1990 Average .....	16	-51	13,409	109	24	908	586	323
1991 Average .....	-47	5	13,301	116	18	893	569	325
1992 Average .....	17	-18	13,411	89	13	893	575	318
1993 Average .....	34	47	13,613	98	10	922	587	335
1994 Average .....	13	5	13,866	99	9	929	592	303
1995 Average .....	(s)	-93	13,973	95	7	895	592	303
1996 Average .....	-71	-53	14,195	110	6	850	566	284
1997 January .....	-75	537	13,664	141	5	864	563	301
February .....	(s)	-121	13,485	229	6	861	563	297
March .....	(s)	520	14,047	136	5	877	563	313
April .....	(s)	197	14,303	92	3	883	563	319
May .....	(s)	230	15,123	26	4	890	563	326
June .....	(s)	-199	15,170	57	2	884	563	320
July .....	(s)	-343	14,994	70	2	873	563	310
August .....	(s)	-283	15,271	110	(s)	864	563	301
September .....	(s)	95	15,308	122	(s)	867	563	304
October .....	(s)	393	14,854	152	0	879	563	316
November .....	(s)	252	14,706	32	0	887	563	324
December .....	(s)	-607	14,928	131	0	868	563	305
Average .....	-7	57	14,662	108	2	—	—	—
1998 January .....	(s)	389	14,319	231	0	880	563	317
February .....	(s)	38	14,023	197	0	881	563	318
March .....	0	538	14,639	99	0	898	563	334
April .....	0	556	15,085	163	0	915	563	351
May .....	(s)	-9	15,321	144	0	914	563	351
June .....	(s)	-620	15,485	63	0	896	563	332
July .....	(s)	187	15,554	104	0	901	563	338
August .....	0	-293	15,717	51	0	892	563	329
September .....	0	-641	14,851	34	0	873	563	310
October .....	19	658	13,994	87	0	894	564	330
November .....	150	170	14,772	60	0	904	569	335
December .....	93	-378	14,840	90	0	895	571	324
Average .....	22	52	14,889	110	0	—	—	—
1999 January .....	18	280	14,442	107	0	904	572	332
February .....	(s)	50	14,309	119	0	906	572	334
March .....	0	367	14,498	95	0	917	572	345
April .....	17	-317	15,094	332	0	908	572	335
May .....	37	145	14,973	88	0	914	574	340
June .....	40	-276	14,959	123	0	907	575	332
July .....	29	5	15,237	120	0	908	576	332
August .....	-27	-539	15,299	132	0	890	575	315
September .....	20	-388	15,107	27	0	879	575	304
October .....	-103	18	14,589	56	0	876	572	304
November .....	-105	-191	14,704	83	0	867	569	298
December .....	-60	-447	14,410	133	0	852	567	284
Average .....	-11	-107	14,804	118	0	—	—	—

Footnotes continued.

SPR = Strategic Petroleum Reserve.

(s)=Less than 500 barrels per day.

Notes: • Crude oil includes lease condensate. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present**  
(Thousand Barrels per Day)

Year/Month		Imports from Arab-OPEC Sources							
		Algeria		Iraq		Kuwait <sup>b</sup>		Libya	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	323	194	12	12	36	24	1	0
1985	Average .....	187	84	46	46	21	4	4	0
1986	Average .....	271	78	81	81	68	28	0	0
1987	Average .....	295	115	83	82	84	70	0	0
1988	Average .....	300	58	345	343	92	80	0	0
1989	Average .....	269	60	449	441	157	155	0	0
1990	Average .....	280	63	518	514	86	79	0	0
1991	Average .....	253	44	0	0	6	6	0	0
1992	Average .....	196	24	0	0	51	39	0	0
1993	Average .....	220	24	0	0	353	344	0	0
1994	Average .....	243	21	0	0	312	307	0	0
1995	Average .....	234	27	0	0	218	213	0	0
1996	Average .....	256	8	1	1	236	235	0	0
1997	January .....	282	0	0	0	209	209	0	0
	February .....	319	0	0	0	172	172	0	0
	March .....	309	0	35	35	315	315	0	0
	April .....	320	23	84	84	204	204	0	0
	May .....	290	0	102	102	128	128	0	0
	June .....	349	0	115	115	361	361	0	0
	July .....	291	0	88	88	331	331	0	0
	August .....	261	4	(s)	(s)	229	229	0	0
	September .....	259	6	0	0	322	322	0	0
	October .....	272	3	177	177	349	349	0	0
	November .....	267	7	220	220	220	220	0	0
	December .....	208	28	240	240	188	188	0	0
	Average .....	285	6	89	89	253	253	0	0
1998	January .....	316	0	36	36	252	252	0	0
	February .....	295	0	0	0	338	338	0	0
	March .....	255	0	127	127	374	374	0	0
	April .....	336	0	254	254	311	311	0	0
	May .....	330	0	137	137	399	399	0	0
	June .....	362	21	270	270	275	275	0	0
	July .....	308	20	286	286	435	435	0	0
	August .....	264	0	713	713	273	273	0	0
	September .....	306	0	517	517	259	259	0	0
	October .....	289	21	636	636	241	227	0	0
	November .....	219	22	542	542	224	224	0	0
	December .....	200	31	486	486	228	228	0	0
	Average .....	290	10	336	336	301	300	0	0
1999	January .....	246	20	485	485	132	132	0	0
	February .....	209	6	681	681	205	205	0	0
	March .....	285	6	791	791	324	324	0	0
	April .....	321	80	829	829	286	279	0	0
	May .....	303	107	750	750	227	227	0	0
	June .....	255	7	773	773	259	259	0	0
	July .....	302	48	680	680	311	311	0	0
	August .....	249	0	672	672	348	348	0	0
	September .....	255	4	741	741	261	261	0	0
	October .....	183	0	922	922	205	205	0	0
	November .....	211	11	713	713	216	216	0	0
	December .....	279	15	668	668	200	186	0	0
	Average .....	259	25	725	725	248	246	0	0

See footnotes at end of table.



**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Arab-OPEC Sources						Total Arab OPEC	
		Qatar		Saudi Arabia <sup>b</sup>		United Arab Emirates			
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	5	4	325	309	117	90	819	634
1985	Average .....	(s)	0	168	132	45	35	472	300
1986	Average .....	13	12	685	618	44	38	1,162	854
1987	Average .....	0	0	751	642	61	56	1,274	965
1988	Average .....	0	0	1,073	911	29	23	1,839	1,415
1989	Average .....	2	2	1,224	1,116	28	21	2,130	1,794
1990	Average .....	4	4	1,339	1,195	17	9	2,244	1,864
1991	Average .....	0	0	1,802	1,703	3	2	2,064	1,754
1992	Average .....	1	0	1,720	1,597	6	0	1,974	1,660
1993	Average .....	1	0	1,414	1,282	14	12	2,000	1,661
1994	Average .....	0	0	1,402	1,297	13	11	1,970	1,636
1995	Average .....	0	0	1,344	1,260	10	5	1,806	1,505
1996	Average .....	0	0	1,363	1,248	3	3	1,859	1,496
1997	January .....	0	0	1,344	1,253	0	0	1,835	1,462
	February .....	0	0	1,361	1,250	0	0	1,852	1,421
	March .....	0	0	1,292	1,157	0	0	1,950	1,506
	April .....	15	0	1,573	1,408	0	0	2,197	1,720
	May .....	0	0	1,475	1,333	0	0	1,996	1,564
	June .....	0	0	1,299	1,174	6	0	2,130	1,650
	July .....	0	0	1,313	1,188	14	0	2,037	1,607
	August .....	0	0	1,636	1,516	0	0	2,127	1,750
	September .....	0	0	1,599	1,511	0	0	2,180	1,839
	October .....	16	0	1,377	1,282	0	0	2,191	1,812
	November .....	0	0	1,308	1,257	0	0	2,015	1,704
	December .....	15	0	1,311	1,192	0	0	1,962	1,649
	Average .....	4	0	1,407	1,293	2	0	2,040	1,641
1998	January .....	0	0	1,515	1,438	0	0	2,119	1,726
	February .....	18	18	1,470	1,360	0	0	2,121	1,716
	March .....	0	0	1,552	1,406	13	13	2,321	1,920
	April .....	0	0	1,527	1,348	20	20	2,446	1,933
	May .....	0	0	1,362	1,279	0	0	2,228	1,815
	June .....	15	0	1,647	1,566	0	0	2,569	2,132
	July .....	15	0	1,615	1,575	0	0	2,660	2,315
	August .....	0	0	1,500	1,468	0	0	2,750	2,453
	September .....	0	0	1,606	1,532	0	0	2,689	2,308
	October .....	0	0	1,316	1,228	0	0	2,483	2,113
	November .....	0	0	1,386	1,323	0	0	2,371	2,111
	December .....	0	0	1,402	1,326	0	0	2,316	2,071
	Average .....	4	1	1,491	1,404	3	3	2,424	2,053
1999	January .....	0	0	1,511	1,410	0	0	2,375	2,047
	February .....	0	0	1,497	1,417	0	0	2,592	2,309
	March .....	34	0	1,652	1,584	0	0	3,086	2,704
	April .....	31	0	1,482	1,417	5	0	2,954	2,606
	May .....	0	0	1,502	1,406	0	0	2,783	2,491
	June .....	0	0	1,539	1,438	19	0	2,845	2,477
	July .....	0	0	1,436	1,296	0	0	2,729	2,335
	August .....	18	0	1,474	1,373	3	0	2,763	2,392
	September .....	14	0	1,441	1,330	0	0	2,712	2,337
	October .....	0	0	1,353	1,251	0	0	2,663	2,378
	November .....	11	11	1,396	1,334	0	0	2,547	2,285
	December .....	8	0	1,455	1,391	0	0	2,610	2,260
	Average .....	10	1	1,478	1,387	2	0	2,722	2,385

See footnotes at end of table.

**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Other-OPEC Sources							
		Ecuador <sup>c</sup>		Gabon		Indonesia		Iran	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	55	47	58	57	343	304	10	10
1985	Average .....	67	56	52	51	314	292	27	27
1986	Average .....	77	64	26	25	318	297	19	19
1987	Average .....	29	23	35	35	285	262	98	98
1988	Average .....	47	33	16	15	205	186	<sup>g</sup> (s)	<sup>g</sup> (s)
1989	Average .....	89	80	50	49	183	158	0	0
1990	Average .....	49	38	64	64	114	98	0	0
1991	Average .....	63	53	84	84	111	102	32	32
1992	Average .....	65	62	124	123	78	70	0	0
1993	Average .....	81	78	152	151	81	65	0	0
1994	Average .....	(c)	(c)	194	194	111	92	0	0
1995	Average .....	(c)	(c)	(d)	(d)	88	64	0	0
1996	Average .....	(c)	(c)	(d)	(d)	59	44	0	0
1997	January .....	(c)	(c)	(d)	(d)	55	38	0	0
	February .....	(c)	(c)	(d)	(d)	51	39	0	0
	March .....	(c)	(c)	(d)	(d)	18	15	0	0
	April .....	(c)	(c)	(d)	(d)	40	32	0	0
	May .....	(c)	(c)	(d)	(d)	86	86	0	0
	June .....	(c)	(c)	(d)	(d)	57	50	0	0
	July .....	(c)	(c)	(d)	(d)	73	66	0	0
	August .....	(c)	(c)	(d)	(d)	24	21	0	0
	September .....	(c)	(c)	(d)	(d)	90	83	0	0
	October .....	(c)	(c)	(d)	(d)	42	42	0	0
	November .....	(c)	(c)	(d)	(d)	79	74	0	0
	December .....	(c)	(c)	(d)	(d)	84	68	0	0
	Average .....	(c)	(c)	(d)	(d)	58	51	0	0
1998	January .....	(c)	(c)	(d)	(d)	36	33	0	0
	February .....	(c)	(c)	(d)	(d)	24	24	0	0
	March .....	(c)	(c)	(d)	(d)	50	47	0	0
	April .....	(c)	(c)	(d)	(d)	44	26	0	0
	May .....	(c)	(c)	(d)	(d)	21	21	0	0
	June .....	(c)	(c)	(d)	(d)	0	0	0	0
	July .....	(c)	(c)	(d)	(d)	96	84	0	0
	August .....	(c)	(c)	(d)	(d)	59	41	0	0
	September .....	(c)	(c)	(d)	(d)	73	54	0	0
	October .....	(c)	(c)	(d)	(d)	102	89	0	0
	November .....	(c)	(c)	(d)	(d)	183	138	0	0
	December .....	(c)	(c)	(d)	(d)	102	43	0	0
	Average .....	(c)	(c)	(d)	(d)	66	50	0	0
1999	January .....	(c)	(c)	(d)	(d)	100	75	0	0
	February .....	(c)	(c)	(d)	(d)	66	66	0	0
	March .....	(c)	(c)	(d)	(d)	43	40	0	0
	April .....	(c)	(c)	(d)	(d)	98	94	0	0
	May .....	(c)	(c)	(d)	(d)	105	98	0	0
	June .....	(c)	(c)	(d)	(d)	66	52	0	0
	July .....	(c)	(c)	(d)	(d)	19	14	0	0
	August .....	(c)	(c)	(d)	(d)	95	85	0	0
	September .....	(c)	(c)	(d)	(d)	95	63	0	0
	October .....	(c)	(c)	(d)	(d)	98	79	0	0
	November .....	(c)	(c)	(d)	(d)	74	68	0	0
	December .....	(c)	(c)	(d)	(d)	118	99	0	0
	Average .....	(c)	(c)	(d)	(d)	81	70	0	0

See footnotes at end of table.

**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Other-OPEC Sources						Total OPEC <sup>c,d,e</sup>	
		Nigeria		Venezuela		Total Other OPEC <sup>c</sup>			
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	216	207	548	253	1,230	878	2,049	1,512
1985	Average .....	293	280	605	306	1,358	1,012	1,830	1,312
1986	Average .....	440	437	793	416	1,674	1,259	2,837	2,113
1987	Average .....	535	529	804	488	1,787	1,435	3,060	2,400
1988	Average .....	618	607	794	439	1,681	1,281	3,520	2,696
1989	Average .....	815	800	873	495	2,010	1,582	4,140	3,376
1990	Average .....	800	784	1,025	666	2,052	1,650	4,296	3,514
1991	Average .....	703	683	1,035	668	2,028	1,622	4,092	3,377
1992	Average .....	681	665	1,170	826	2,117	1,746	4,092	3,406
1993	Average .....	740	722	1,300	1,010	2,354	2,026	4,354	3,687
1994	Average .....	637	624	1,334	1,034	2,277	1,944	4,247	3,580
1995	Average .....	627	621	1,480	1,151	2,196	1,835	4,002	3,341
1996	Average .....	617	595	1,676	1,303	2,353	1,942	4,211	3,438
1997	January .....	548	522	1,641	1,215	2,243	1,775	4,078	3,237
	February .....	625	620	1,601	1,262	2,278	1,920	4,130	3,341
	March .....	542	541	1,769	1,348	2,329	1,904	4,279	3,410
	April .....	756	747	1,695	1,319	2,491	2,098	4,688	3,818
	May .....	992	975	1,927	1,449	3,005	2,510	5,001	4,073
	June .....	919	919	1,893	1,508	2,869	2,478	4,999	4,128
	July .....	580	571	1,738	1,418	2,391	2,055	4,429	3,662
	August .....	882	866	1,794	1,394	2,700	2,280	4,827	4,030
	September .....	769	769	1,822	1,478	2,680	2,329	4,860	4,168
	October .....	688	675	1,991	1,605	2,722	2,323	4,913	4,134
	November .....	649	649	1,689	1,418	2,416	2,141	4,431	3,845
	December .....	423	423	1,699	1,304	2,205	1,795	4,168	3,444
	Average .....	698	689	1,773	1,394	2,529	2,134	4,569	3,775
1998	January .....	630	625	1,597	1,319	2,262	1,977	4,382	3,703
	February .....	560	560	1,764	1,357	2,348	1,941	4,469	3,657
	March .....	845	845	1,698	1,313	2,594	2,205	4,915	4,126
	April .....	822	822	1,743	1,423	2,610	2,272	5,056	4,205
	May .....	899	892	1,911	1,549	2,831	2,463	5,058	4,278
	June .....	771	755	1,616	1,374	2,387	2,129	4,956	4,261
	July .....	873	871	1,779	1,445	2,747	2,400	5,407	4,716
	August .....	736	726	1,703	1,349	2,498	2,116	5,247	4,569
	September .....	502	496	1,490	1,199	2,064	1,749	4,753	4,057
	October .....	633	626	1,963	1,548	2,699	2,263	5,181	4,376
	November .....	574	545	1,708	1,367	2,466	2,050	4,837	4,161
	December .....	490	483	1,651	1,271	2,244	1,797	4,560	3,868
	Average .....	696	689	1,719	1,377	2,481	2,116	4,905	4,169
1999	January .....	702	686	1,641	1,243	2,444	2,004	4,819	4,051
	February .....	701	661	1,751	1,298	2,518	2,025	5,110	4,334
	March .....	650	613	1,331	1,001	2,023	1,654	5,109	4,358
	April .....	890	848	1,737	1,420	2,725	2,362	5,679	4,968
	May .....	617	572	1,574	1,213	2,296	1,883	5,079	4,374
	June .....	703	667	1,426	1,047	2,195	1,766	5,040	4,243
	July .....	666	645	1,602	1,222	2,287	1,881	5,016	4,216
	August .....	800	766	1,480	1,183	2,374	2,035	5,137	4,427
	September .....	535	505	1,484	1,138	2,113	1,707	4,825	4,044
	October .....	543	522	1,340	1,041	1,981	1,642	4,645	4,020
	November .....	588	548	1,222	942	1,885	1,558	4,431	3,843
	December .....	490	450	1,346	1,069	1,954	1,618	4,564	3,878
	Average .....	657	623	1,493	1,150	2,231	1,843	4,953	4,228

See footnotes at end of table.



**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources <sup>a</sup>											
		Angola		Australia		Bahama Islands		Brazil		Canada		China, Peoples Republic of	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	90	85	38	25	88	0	60	(s)	630	341	46	15
1985	Average .....	110	104	37	21	40	0	61	0	770	468	59	36
1986	Average .....	112	102	41	30	37	0	50	0	807	570	90	68
1987	Average .....	192	180	58	49	37	0	84	0	848	608	82	63
1988	Average .....	212	203	64	59	32	0	98	0	999	681	88	82
1989	Average .....	284	279	36	31	34	0	82	0	931	630	80	76
1990	Average .....	237	236	53	47	37	0	49	0	934	643	80	77
1991	Average .....	254	254	26	21	35	0	22	0	1,033	743	91	87
1992	Average .....	336	336	19	17	36	0	20	0	1,069	797	90	84
1993	Average .....	336	336	19	18	28	0	33	0	1,181	900	51	50
1994	Average .....	331	322	17	16	29	0	31	1	1,272	983	65	64
1995	Average .....	367	360	16	16	2	0	8	0	1,332	1,040	53	53
1996	Average .....	351	344	31	25	1	0	9	0	1,424	1,075	57	57
1997	January .....	485	485	21	21	0	0	1	0	1,571	1,162	84	84
	February .....	422	422	0	0	13	0	0	0	1,605	1,155	65	65
	March .....	467	461	37	37	0	0	4	0	1,508	1,158	120	120
	April .....	435	422	22	22	0	0	0	0	1,454	1,063	46	46
	May .....	374	369	61	44	0	0	0	0	1,571	1,203	21	21
	June .....	480	480	23	23	0	0	20	0	1,546	1,184	44	44
	July .....	416	416	77	48	0	0	21	0	1,547	1,201	0	0
	August .....	323	323	91	60	0	0	4	0	1,630	1,275	42	42
	September .....	428	428	67	27	0	0	3	0	1,577	1,250	49	43
	October .....	537	537	92	53	0	0	6	0	1,503	1,175	48	47
	November .....	480	480	23	23	0	0	2	0	1,559	1,213	22	22
	December .....	286	286	59	14	0	0	0	0	1,689	1,333	45	45
	Average .....	427	425	48	31	1	0	5	0	1,563	1,198	49	48
1998	January .....	430	427	10	0	0	0	6	0	1,703	1,336	15	14
	February .....	434	434	57	48	4	0	2	0	1,738	1,366	41	41
	March .....	353	351	44	30	0	0	27	0	1,464	1,132	64	63
	April .....	457	452	68	14	0	0	11	0	1,586	1,241	62	62
	May .....	516	508	82	60	21	0	42	0	1,600	1,302	70	70
	June .....	399	399	77	33	11	0	55	0	1,688	1,404	81	81
	July .....	591	591	69	48	0	0	29	0	1,669	1,364	73	73
	August .....	427	427	42	21	0	0	38	0	1,564	1,248	57	57
	September .....	506	502	77	23	10	0	33	0	1,575	1,227	20	20
	October .....	470	457	71	30	0	0	29	0	1,570	1,202	25	24
	November .....	524	520	31	31	0	0	19	0	1,495	1,199	0	0
	December .....	509	505	57	36	0	0	22	0	1,542	1,184	1	0
	Average .....	468	465	57	31	4	0	26	0	1,598	1,266	42	42
1999	January .....	421	421	0	0	0	0	3	0	1,600	1,196	(s)	0
	February .....	380	364	73	49	0	0	22	0	1,459	1,081	2	0
	March .....	270	270	53	53	0	0	15	0	1,365	1,056	31	30
	April .....	401	393	19	19	7	0	26	0	1,373	1,057	21	21
	May .....	407	400	55	37	23	0	47	0	1,523	1,104	2	0
	June .....	334	334	56	34	0	0	48	0	1,477	1,159	67	19
	July .....	349	349	30	30	8	0	31	0	1,694	1,354	19	19
	August .....	309	309	65	47	0	0	30	0	1,653	1,263	72	33
	September .....	465	465	110	65	0	0	16	0	1,407	1,067	37	34
	October .....	444	444	0	0	0	0	18	0	1,627	1,229	0	0
	November .....	307	307	22	22	0	0	37	0	1,592	1,264	1	0
	December .....	244	227	23	23	0	0	18	0	1,684	1,291	1	0
	Average .....	361	357	42	31	3	0	26	0	1,539	1,178	21	13

See footnotes at end of table.

**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources <sup>a</sup>											
		Colombia		Ecuador <sup>c</sup>		Gabon <sup>d</sup>		Italy		Malaysia		Mexico	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	8	0	(c)	(c)	(d)	(d)	45	(s)	1	0	748	659
1985	Average .....	23	0	(c)	(c)	(d)	(d)	60	(s)	3	1	816	715
1986	Average .....	87	57	(c)	(c)	(d)	(d)	76	0	12	11	699	621
1987	Average .....	148	115	(c)	(c)	(d)	(d)	54	1	13	12	655	602
1988	Average .....	134	106	(c)	(c)	(d)	(d)	65	5	19	19	747	674
1989	Average .....	172	136	(c)	(c)	(d)	(d)	34	3	39	39	767	716
1990	Average .....	182	140	(c)	(c)	(d)	(d)	58	2	41	40	755	689
1991	Average .....	163	123	(c)	(c)	(d)	(d)	47	3	24	24	807	759
1992	Average .....	126	102	(c)	(c)	(d)	(d)	55	0	10	10	830	787
1993	Average .....	171	141	(c)	(c)	(d)	(d)	31	0	11	10	919	863
1994	Average .....	161	146	91	91	(d)	(d)	22	0	10	6	984	939
1995	Average .....	219	207	97	96	229	229	5	0	8	6	1,068	1,027
1996	Average .....	234	226	104	96	184	184	8	0	11	6	1,244	1,207
1997	January .....	227	226	112	107	62	62	8	0	32	0	1,324	1,280
	February .....	248	248	110	110	262	262	27	0	7	7	1,277	1,241
	March .....	260	257	148	148	217	217	5	0	33	0	1,310	1,249
	April .....	255	255	73	73	203	203	26	0	33	0	1,448	1,416
	May .....	272	266	109	104	210	210	9	0	9	0	1,429	1,408
	June .....	228	228	132	132	226	226	0	0	32	24	1,401	1,382
	July .....	235	225	122	122	335	335	0	0	28	0	1,366	1,347
	August .....	250	250	128	128	203	203	2	0	23	15	1,452	1,448
	September .....	289	289	143	143	271	271	0	0	37	29	1,410	1,395
	October .....	321	321	143	143	235	235	8	0	19	19	1,526	1,500
	November .....	322	322	91	91	256	256	0	0	8	0	1,460	1,453
	December .....	350	350	66	66	288	288	5	0	7	0	1,215	1,192
	Average .....	271	270	115	114	230	230	7	0	23	8	1,385	1,360
1998	January .....	345	345	89	89	277	277	26	0	17	11	1,444	1,432
	February .....	301	294	103	103	278	278	6	0	64	49	1,250	1,233
	March .....	296	296	75	75	235	235	17	0	10	10	1,272	1,248
	April .....	358	358	88	81	244	244	2	0	82	66	1,538	1,507
	May .....	401	385	125	116	194	194	35	0	95	87	1,361	1,343
	June .....	321	313	75	67	126	126	18	0	35	19	1,400	1,379
	July .....	238	229	89	89	211	211	8	0	46	38	1,416	1,389
	August .....	367	363	158	158	118	118	10	0	11	4	1,153	1,139
	September .....	363	362	107	96	202	202	0	0	16	0	1,417	1,367
	October .....	411	409	130	125	115	115	18	0	9	0	1,179	1,163
	November .....	352	352	134	134	270	270	0	0	25	16	1,417	1,357
	December .....	488	479	41	38	220	220	6	0	19	10	1,371	1,301
	Average .....	354	349	101	98	207	207	12	0	35	26	1,351	1,321
1999	January .....	445	440	70	66	194	194	0	0	28	13	1,337	1,254
	February .....	480	458	51	45	175	175	17	0	20	0	1,279	1,231
	March .....	592	572	131	123	111	111	10	0	0	0	1,490	1,434
	April .....	435	425	67	61	269	269	19	0	27	14	1,403	1,315
	May .....	458	443	145	128	190	190	30	0	67	56	1,333	1,246
	June .....	370	351	112	112	92	92	8	0	31	22	1,355	1,297
	July .....	600	572	88	88	140	140	0	0	30	17	1,379	1,310
	August .....	547	521	133	133	95	95	0	0	64	49	1,339	1,225
	September .....	406	388	136	136	159	159	8	0	44	22	1,282	1,219
	October .....	432	432	163	163	186	186	7	0	39	36	1,189	1,131
	November .....	416	396	185	179	190	190	6	0	30	10	1,230	1,165
	December .....	433	421	128	128	216	216	13	0	32	13	1,272	1,217
	Average .....	468	452	118	114	168	168	10	0	35	21	1,324	1,254

See footnotes at end of table.

**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources <sup>a</sup>											
		Netherlands		Netherlands Antilles		Norway		Puerto Rico		Russia <sup>f</sup>		Spain	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	65	3	188	0	114	112	42	0	13	(s)	11	0
1985	Average .....	58	0	40	0	32	31	28	0	8	(s)	29	1
1986	Average .....	54	0	25	0	60	53	21	0	18	(s)	53	0
1987	Average .....	60	0	29	0	80	70	21	0	11	0	55	0
1988	Average .....	61	0	36	0	67	62	22	0	29	0	68	0
1989	Average .....	49	0	42	0	138	127	32	0	48	0	67	0
1990	Average .....	55	0	31	0	102	96	32	0	45	1	47	0
1991	Average .....	29	0	81	0	82	74	27	0	29	1	33	0
1992	Average .....	26	0	65	0	127	119	26	0	18	5	32	0
1993	Average .....	10	0	82	0	142	137	29	0	55	36	37	0
1994	Average .....	32	0	98	0	202	190	22	0	30	27	37	0
1995	Average .....	15	0	52	0	273	258	15	0	25	14	16	1
1996	Average .....	19	0	64	0	313	293	20	0	25	18	29	1
1997	January .....	40	0	94	0	244	230	18	0	21	0	31	0
	February .....	33	0	60	0	204	179	16	0	19	0	36	0
	March .....	40	0	102	0	295	276	7	0	13	0	6	0
	April .....	20	0	114	0	307	294	12	0	20	0	9	0
	May .....	13	0	116	0	388	366	21	0	0	0	23	0
	June .....	37	0	66	0	329	318	13	0	8	0	45	0
	July .....	5	0	61	0	386	360	24	0	9	0	6	0
	August .....	15	0	65	0	321	320	20	0	32	19	41	0
	September .....	54	0	71	0	285	265	14	0	0	0	21	0
	October .....	13	0	46	0	346	312	19	0	13	6	12	0
	November .....	28	0	33	0	316	276	23	0	21	7	19	0
	December .....	1	0	54	0	275	249	10	0	0	0	5	0
	Average .....	25	0	74	0	309	288	16	0	13	3	21	0
1998	January .....	10	0	97	0	217	208	18	0	0	0	22	0
	February .....	25	0	101	0	169	169	21	0	12	0	13	0
	March .....	5	0	80	0	210	198	5	0	3	0	4	0
	April .....	40	0	73	0	232	232	7	0	(s)	0	9	0
	May .....	36	0	67	0	196	172	18	0	0	0	14	0
	June .....	31	0	103	0	283	252	13	0	34	34	26	0
	July .....	59	0	84	0	369	361	21	0	69	69	34	0
	August .....	21	0	45	0	287	260	23	0	1	0	17	0
	September .....	26	0	69	0	201	162	12	0	34	0	16	0
	October .....	49	0	95	0	199	186	20	0	15	0	4	0
	November .....	53	0	124	0	262	252	12	0	54	0	28	0
	December .....	14	0	46	0	202	199	15	0	63	0	33	0
	Average .....	31	0	82	0	236	221	15	0	24	9	18	0
1999	January .....	21	0	95	0	216	179	18	0	28	0	4	0
	February .....	7	0	160	0	203	157	0	0	28	0	0	0
	March .....	20	0	58	0	248	199	3	0	26	0	5	0
	April .....	34	0	76	0	265	192	15	0	75	43	13	0
	May .....	65	0	81	0	293	244	10	0	109	45	26	0
	June .....	44	0	31	0	524	497	15	0	149	22	0	0
	July .....	37	0	83	0	408	396	13	0	139	32	8	0
	August .....	35	0	58	0	244	222	12	0	138	14	13	0
	September .....	2	0	30	0	235	195	22	0	142	39	(s)	0
	October .....	17	0	49	0	341	292	13	0	110	31	22	0
	November .....	24	0	44	0	288	255	12	0	94	16	23	0
	December .....	11	0	24	0	371	326	15	0	31	12	9	0
	Average .....	27	0	65	0	304	263	13	0	89	21	10	0

See footnotes at end of table.



**Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)**  
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources <sup>a</sup>										Total Imports	
		Trinidad and Tobago		United Kingdom		Virgin Islands		Other Non-OPEC		Total Non-OPEC <sup>c</sup>			
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984	Average .....	94	87	402	378	294	0	411	210	3,388	1,914	5,437	3,426
1985	Average .....	113	98	310	278	247	0	394	137	3,237	1,888	5,067	3,201
1986	Average .....	125	93	350	317	244	0	426	144	3,387	2,065	6,224	4,178
1987	Average .....	106	75	352	304	272	0	459	196	3,617	2,274	6,678	4,674
1988	Average .....	97	71	315	254	242	0	487	196	3,882	2,411	7,402	5,107
1989	Average .....	94	73	215	160	321	0	457	197	3,921	2,467	8,061	5,843
1990	Average .....	96	76	189	155	282	0	417	180	3,721	2,381	8,018	5,894
1991	Average .....	88	72	138	106	243	0	282	137	3,535	2,405	7,627	5,782
1992	Average .....	95	70	230	200	249	0	335	149	3,796	2,676	7,888	6,083
1993	Average .....	74	55	350	312	254	0	452	240	4,266	3,100	8,620	6,787
1994	Average .....	77	62	458	396	328	0	450	239	4,749	3,483	8,996	7,063
1995	Average .....	70	62	383	341	278	0	302	181	4,833	3,889	8,835	7,230
1996	Average .....	76	58	308	216	313	0	440	265	5,267	4,070	9,478	7,508
1997	January .....	74	55	400	333	335	0	502	210	5,685	4,255	9,763	7,492
	February .....	69	61	236	172	341	0	380	170	5,431	4,093	9,561	7,434
	March .....	56	55	236	161	254	0	437	206	5,554	4,344	9,833	7,754
	April .....	69	62	159	70	321	0	401	242	5,426	4,169	10,114	7,987
	May .....	70	66	261	181	300	0	558	341	5,817	4,579	10,818	8,653
	June .....	55	55	372	311	300	0	380	225	5,737	4,631	10,736	8,759
	July .....	62	54	198	165	310	0	370	243	5,579	4,515	10,008	8,178
	August .....	41	37	268	220	319	0	368	251	5,638	4,591	10,465	8,621
	September .....	66	58	166	110	248	0	476	364	5,677	4,672	10,537	8,840
	October .....	58	55	154	119	301	0	479	271	5,879	4,793	10,792	8,927
	November .....	65	57	127	87	260	0	403	236	5,517	4,521	9,948	8,366
	December .....	53	53	135	98	314	0	304	235	5,160	4,208	9,328	7,653
	Average .....	61	56	226	169	300	0	422	250	5,593	4,450	10,162	8,225
1998	January .....	64	54	249	166	283	0	424	276	5,745	4,636	10,127	8,339
	February .....	60	60	170	89	296	0	378	224	5,522	4,388	9,991	8,045
	March .....	63	53	95	70	334	0	464	236	5,119	3,998	10,034	8,124
	April .....	78	48	309	221	272	0	533	254	6,048	4,780	11,105	8,985
	May .....	69	53	248	133	292	0	561	287	6,046	4,709	11,104	8,987
	June .....	64	56	231	125	310	0	589	245	5,970	4,533	10,926	8,795
	July .....	90	56	171	36	360	0	545	235	6,242	4,791	11,649	9,507
	August .....	79	53	384	295	281	0	703	466	5,785	4,607	11,032	9,177
	September .....	44	38	154	109	277	0	589	335	5,746	4,443	10,499	8,500
	October .....	65	57	384	278	268	0	554	245	5,680	4,291	10,861	8,667
	November .....	38	38	400	283	266	0	520	327	6,023	4,779	10,860	8,940
	December .....	79	72	199	119	274	0	498	321	5,698	4,484	10,258	8,352
	Average .....	66	53	250	161	293	0	531	288	5,803	4,537	10,708	8,706
1999	January .....	52	34	242	160	300	0	529	386	5,605	4,342	10,424	8,393
	February .....	48	38	260	165	295	0	583	372	5,540	4,134	10,650	8,468
	March .....	28	18	314	261	319	0	460	254	5,549	4,382	10,658	8,739
	April .....	49	37	319	143	271	0	756	300	5,939	4,288	11,618	9,256
	May .....	41	18	569	471	298	0	659	344	6,432	4,725	11,511	9,098
	June .....	52	33	373	317	290	0	689	357	6,119	4,645	11,160	8,888
	July .....	57	31	644	537	278	0	646	300	6,681	5,175	11,697	9,391
	August .....	53	36	321	256	206	0	617	278	6,005	4,481	11,142	8,908
	September .....	83	67	445	366	305	16	499	244	5,831	4,483	10,657	8,527
	October .....	75	66	344	267	284	0	592	318	5,951	4,593	10,595	8,613
	November .....	66	42	336	281	277	0	421	254	5,602	4,381	10,033	8,224
	December .....	92	64	198	174	236	0	450	244	5,501	4,357	10,065	8,234
	Average .....	58	40	365	284	280	1	575	304	5,899	4,502	10,852	8,731

<sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC) primarily from Caribbean and West European areas as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in imports from Saudi Arabia.

<sup>c</sup> On December 31, 1992, Ecuador withdrew as a member of OPEC. As of January 1, 1994, imports of petroleum from Ecuador appear under imports from Non-OPEC Sources.

<sup>d</sup> On December 31, 1994, Gabon withdrew as a member of OPEC. As of January 1, 1995, imports of petroleum from Gabon appear under imports from Non-OPEC Sources.

<sup>e</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>f</sup> Imports from other States in the former U.S.S.R. may be included in imports from Russia for the years 1981 through 1992.

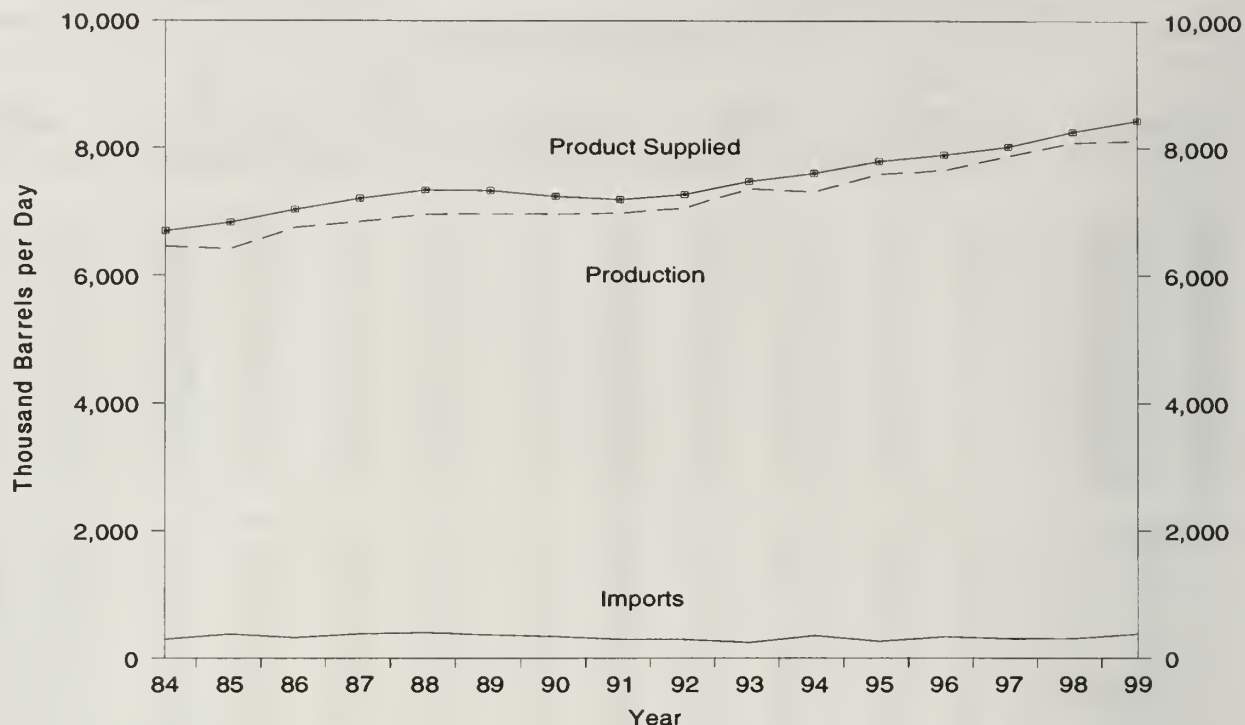
<sup>g</sup> A small amount of Iranian crude oil entered the United States in January 1988 from the Virgin Islands. This oil originated in Iran and was exported to the Virgin Islands prior to the signing of Executive Order 12613 on October 29, 1987.

(s) = Less than 500 barrels per day.

Notes: \* Geographic coverage is the 50 States and the District of Columbia. \* Totals may not equal sum of components due to independent rounding.

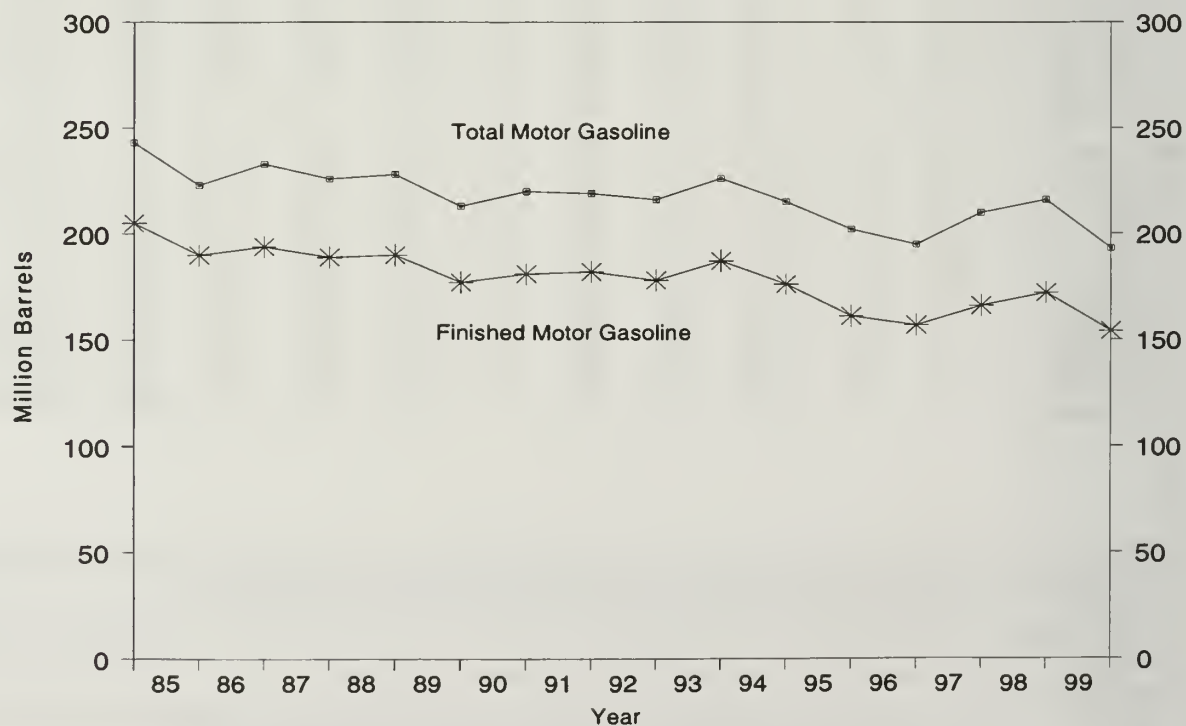
Source: See Summary Statistics Table and Figure Sources.

Figure S5. Finished Motor Gasoline Supply and Disposition, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S4. See Summary Statistics Table and Figure Sources.

Figure S6. Motor Gasoline Ending Stocks, 1984 - Present



Note: Total motor gasoline includes motor gasoline blending components and finished motor gasoline.

Source: Energy Information Administration, *Petroleum Supply Annual*, Table S4. See Summary Statistics Table and Figure Sources.

**Table S4. Finished Motor Gasoline Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks <sup>a</sup> (Million Barrels)		Ending Stocks <sup>a</sup> (Million Barrels)
		Total Production <sup>b</sup>	Imports <sup>c</sup>	Stock Change <sup>c,d</sup>	Exports	Product Supplied <sup>b</sup>	Motor Gasoline		Oxygenates
							Total <sup>e</sup>	Finished	
1984	Average .....	6,453	299	54	6	6,693	243	205	—
1985	Average .....	6,419	381	-41	10	6,831	223	190	—
1986	Average .....	6,752	326	11	33	7,034	233	194	—
1987	Average .....	6,841	384	-15	35	7,206	226	189	—
1988	Average .....	6,956	405	3	22	7,336	228	190	—
1989	Average .....	6,963	369	-35	39	7,328	213	177	—
1990	Average .....	6,959	342	10	55	7,235	220	181	—
1991	Average .....	6,975	297	3	82	7,188	219	182	—
1992	Average .....	7,058	294	-11	96	7,268	216	178	—
1993	Average .....	7,360	247	26	105	7,476	226	187	13
1994	Average .....	7,312	356	-31	97	7,601	215	176	17
1995	Average .....	7,588	265	-40	104	7,789	202	161	12
1996	Average .....	7,647	336	-12	104	7,891	195	157	13
1997	January .....	7,307	320	250	75	7,301	208	165	13
	February .....	7,341	324	-114	111	7,668	204	162	13
	March .....	7,302	370	-247	123	7,796	200	154	14
	April .....	7,811	300	-70	117	8,064	197	152	13
	May .....	8,081	362	203	101	8,139	202	158	13
	June .....	8,186	387	189	96	8,288	204	164	12
	July .....	7,954	291	-414	164	8,496	190	151	13
	August .....	8,075	292	-41	175	8,233	187	150	13
	September .....	8,158	269	275	130	8,023	198	158	13
	October .....	8,037	291	1	186	8,141	200	158	12
	November .....	7,999	239	122	151	7,965	203	162	12
	December .....	8,160	265	154	206	8,065	210	166	12
	Average .....	7,870	309	26	137	8,017	—	—	—
1998	January .....	7,744	259	256	128	7,618	221	174	13
	February .....	7,476	316	-43	124	7,711	221	173	14
	March .....	7,640	281	-203	121	8,004	216	167	14
	April .....	8,144	294	45	81	8,312	215	168	14
	May .....	8,224	342	185	103	8,279	220	174	13
	June .....	8,474	318	113	159	8,520	222	177	14
	July .....	8,300	328	-169	117	8,680	216	172	14
	August .....	8,228	331	-151	141	8,568	210	167	13
	September .....	8,048	310	-116	163	8,310	207	164	13
	October .....	7,992	379	-128	121	8,378	203	160	12
	November .....	8,269	239	253	89	8,167	212	168	13
	December .....	8,406	336	137	153	8,451	216	172	14
	Average .....	8,082	311	15	125	8,253	—	—	—
1999	January .....	7,886	313	368	130	7,701	231	183	14
	February .....	7,607	393	-136	105	8,031	229	179	16
	March .....	7,531	350	-328	81	8,128	217	169	15
	April .....	8,138	521	68	85	8,506	218	171	13
	May .....	8,207	485	173	100	8,420	225	177	15
	June .....	8,402	444	-111	71	8,886	217	173	14
	July .....	8,280	471	-280	89	8,942	204	165	13
	August .....	8,183	338	-160	101	8,579	201	160	14
	September .....	8,187	335	90	128	8,305	207	162	15
	October .....	8,266	375	-31	130	8,542	204	161	15
	November .....	8,142	299	72	128	8,240	205	164	13
	December .....	8,471	260	-305	177	8,859	193	154	14
	Average .....	8,111	382	-49	111	8,431	—	—	—

<sup>a</sup> Stocks are totals as of end of period.

<sup>b</sup> Beginning in 1993, motor gasoline production and product supplied includes blending of fuel ethanol and an adjustment to correct for the imbalance of motor gasoline blending components. Refer to Appendix B, Explanatory Note 10 for 1992 new basis product supplied.

<sup>c</sup> Beginning in 1981, excludes blending components.

<sup>d</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

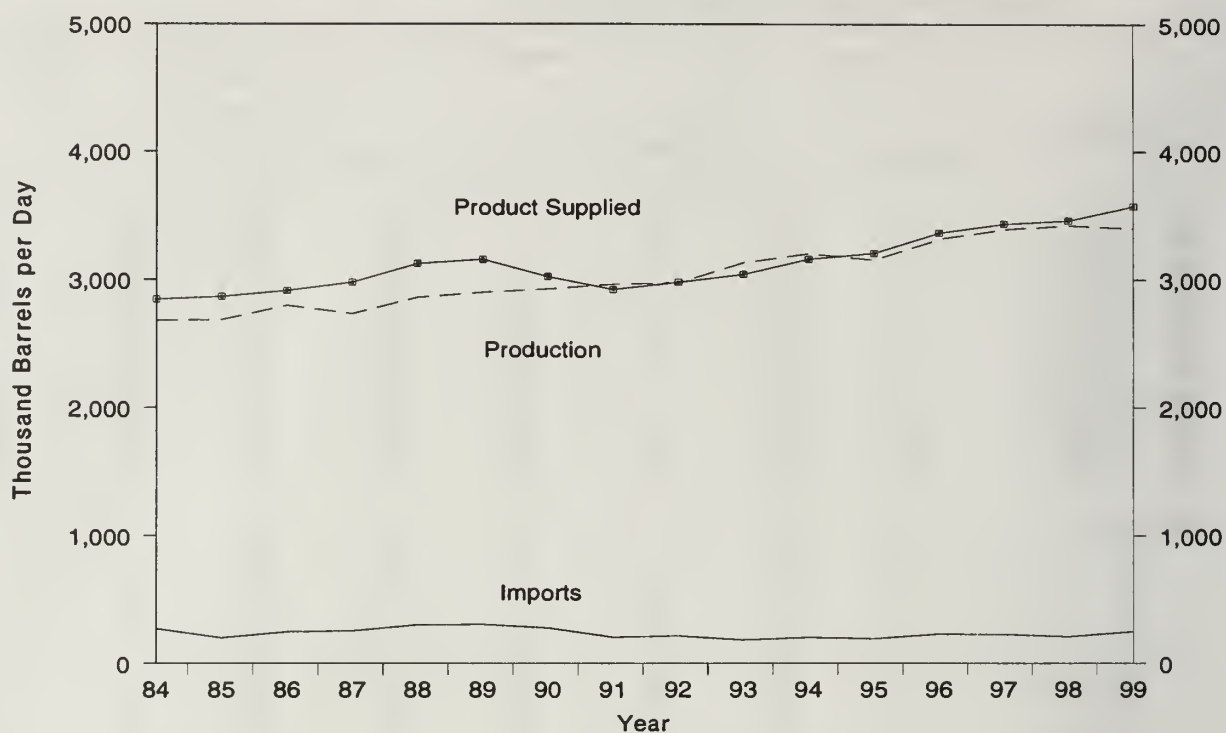
<sup>e</sup> Includes motor gasoline blending components but excludes stocks of oxygenates.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

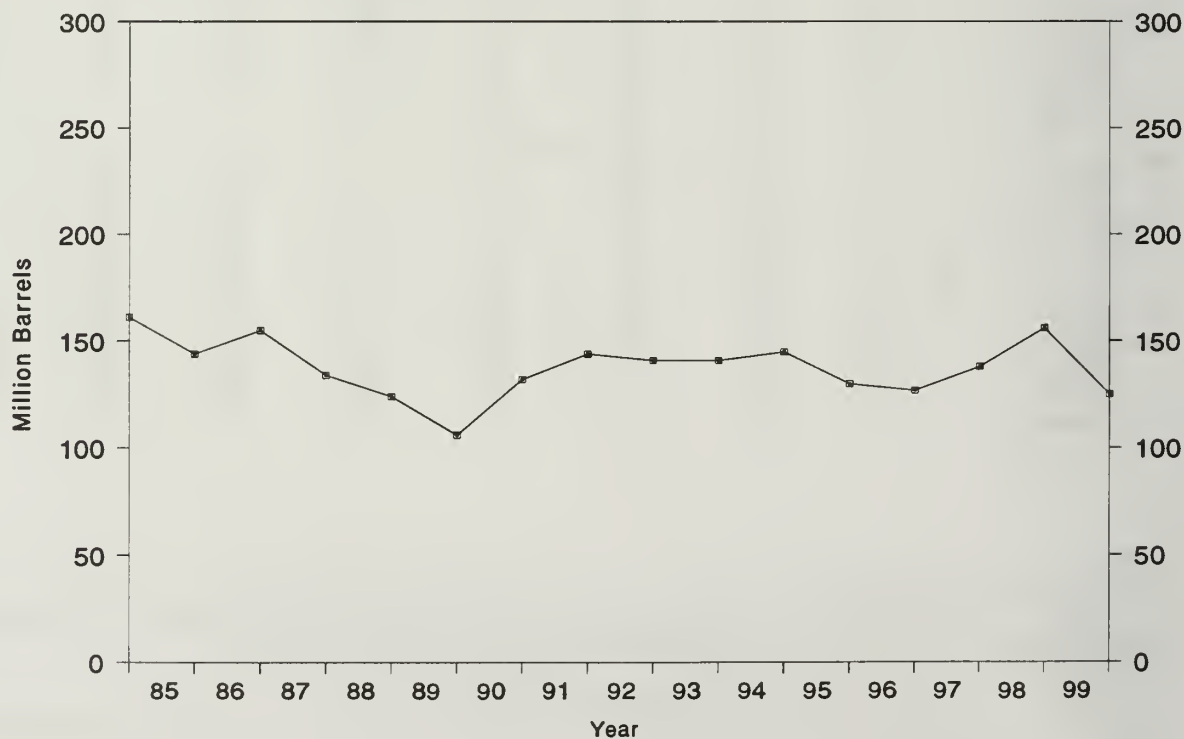


**Figure S7. Distillate Fuel Oil Supply and Disposition, 1984 - Present**



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S5. See Summary Statistics Table and Figure Sources.

**Figure S8. Distillate Fuel Oil Ending Stocks, 1984 - Present**



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S5. See Summary Statistics Table and Figure Sources.

**Table S5. Distillate Fuel Oil Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks <sup>a</sup> (Million Barrels)		
		Total Production	Imports	Stock Change <sup>b</sup>	Exports	Product Supplied	Total	0.05% Sulfur and Under	Greater than 0.05% Sulfur
1984	Average .....	2,681	272	57	51	2,845	161	—	—
1985	Average .....	2,687	200	-48	67	2,868	144	—	—
1986	Average .....	2,798	247	31	100	2,914	155	—	—
1987	Average .....	2,731	255	-56	66	2,976	134	—	—
1988	Average .....	2,859	302	-30	69	3,122	124	—	—
1989	Average .....	2,899	306	-49	97	3,157	106	—	—
1990	Average .....	2,925	278	73	109	3,021	132	—	—
1991	Average .....	2,962	205	31	215	2,921	144	—	—
1992	Average .....	2,974	216	-8	219	2,979	141	—	—
1993	Average .....	3,132	184	1	274	3,041	141	64	77
1994	Average .....	3,205	203	12	234	3,162	145	73	73
1995	Average .....	3,155	193	-41	183	3,207	130	67	63
1996	Average .....	3,316	230	-10	190	3,365	127	68	58
1997	January .....	3,119	293	-508	133	3,786	111	60	51
	February .....	3,090	246	-197	107	3,427	105	56	49
	March .....	3,244	245	-137	120	3,505	101	58	43
	April .....	3,280	256	-134	166	3,504	97	59	39
	May .....	3,527	220	359	153	3,235	108	63	45
	June .....	3,523	219	326	174	3,243	118	65	53
	July .....	3,365	223	161	151	3,275	123	64	59
	August .....	3,439	202	320	185	3,136	133	69	64
	September .....	3,445	210	189	160	3,306	139	69	70
	October .....	3,480	213	-89	133	3,650	136	63	73
	November .....	3,566	175	156	149	3,435	141	68	73
	December .....	3,604	232	-70	192	3,714	138	68	70
	Average .....	3,392	228	32	152	3,435	—	—	—
1998	January .....	3,323	195	-182	133	3,566	133	68	65
	February .....	3,280	213	-184	79	3,598	128	65	63
	March .....	3,397	237	-100	129	3,606	125	64	61
	April .....	3,468	209	26	186	3,465	125	63	63
	May .....	3,560	185	355	121	3,268	136	68	68
	June .....	3,520	202	(s)	149	3,574	136	68	68
	July .....	3,569	229	343	161	3,294	147	73	74
	August .....	3,482	181	67	150	3,446	149	72	77
	September .....	3,399	203	118	107	3,377	153	73	80
	October .....	3,215	239	-169	75	3,547	147	69	79
	November .....	3,438	179	242	54	3,320	155	74	81
	December .....	3,431	245	47	145	3,484	156	77	79
	Average .....	3,424	210	48	124	3,461	—	—	—
1999	January .....	3,176	304	-426	117	3,788	143	74	69
	February .....	3,253	322	-83	116	3,542	141	73	67
	March .....	3,183	248	-513	159	3,785	125	69	56
	April .....	3,407	213	14	191	3,415	125	68	57
	May .....	3,458	261	219	187	3,314	132	70	62
	June .....	3,374	238	25	180	3,407	133	68	65
	July .....	3,521	234	153	123	3,479	137	71	66
	August .....	3,419	273	126	130	3,437	141	69	73
	September .....	3,482	249	139	162	3,431	145	73	72
	October .....	3,506	216	-219	192	3,749	139	69	69
	November .....	3,608	265	94	170	3,608	141	72	69
	December .....	3,401	188	-514	212	3,892	125	69	56
	Average .....	3,399	250	-84	162	3,572	—	—	—

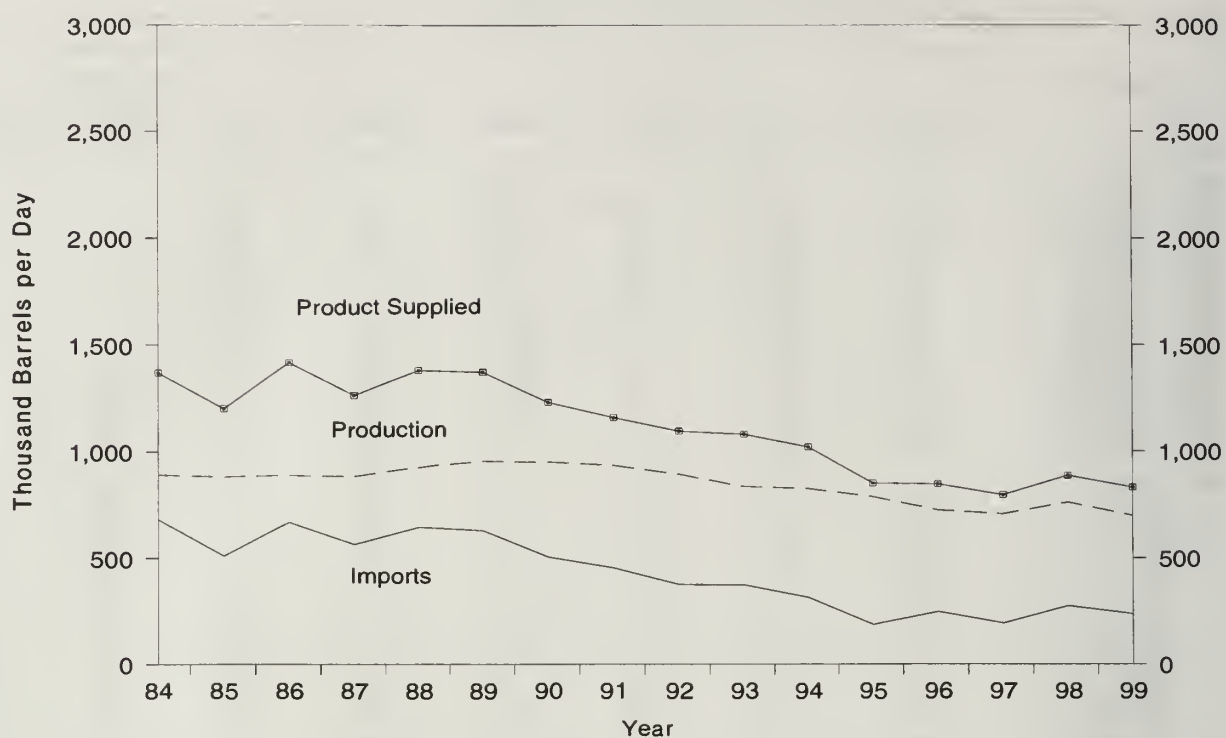
<sup>a</sup> Stocks are totals as of end of period.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

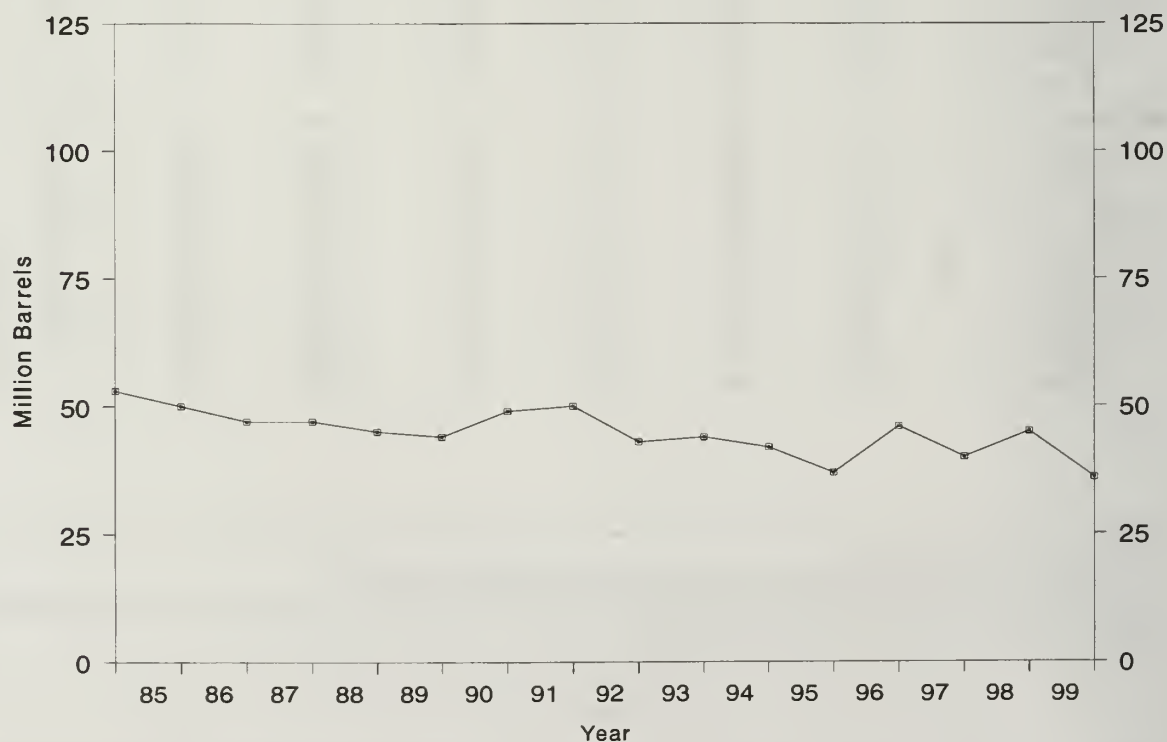
Source: See Summary Statistics Table and Figure Sources.

Figure S9. Residual Fuel Oil Supply and Disposition, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S6. See Summary Statistics Table and Figure Sources.

Figure S10. Residual Fuel Oil Ending Stocks, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S6. See Summary Statistics Table and Figure Sources.



**Table S6. Residual Fuel Oil Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks <sup>b</sup> (Million Barrels)
		Total Production	Imports	Stock Change <sup>a</sup>	Exports	Product Supplied	
1984	Average .....	891	681	12	190	1,369	53
1985	Average .....	882	510	-7	197	1,202	50
1986	Average .....	889	669	-8	147	1,418	47
1987	Average .....	885	565	(s)	186	1,264	47
1988	Average .....	926	644	-8	200	1,378	45
1989	Average .....	954	629	-2	215	1,370	44
1990	Average .....	950	504	13	211	1,229	49
1991	Average .....	934	453	4	226	1,158	50
1992	Average .....	892	375	-20	193	1,094	43
1993	Average .....	835	373	4	123	1,080	44
1994	Average .....	826	314	-6	125	1,021	42
1995	Average .....	788	187	-13	136	852	37
1996	Average .....	726	248	24	102	848	46
1997	January .....	801	211	-131	171	972	42
	February .....	795	253	-66	137	977	40
	March .....	638	239	46	89	742	41
	April .....	617	250	-29	105	791	41
	May .....	618	175	-44	102	736	39
	June .....	727	168	(s)	130	765	39
	July .....	643	177	-119	159	781	35
	August .....	644	187	31	80	720	36
	September .....	687	146	-54	91	797	35
	October .....	723	158	41	133	707	36
	November .....	789	204	61	122	809	38
	December .....	818	167	83	120	781	40
	Average .....	708	194	-15	120	797	—
1998	January .....	765	268	-25	131	927	40
	February .....	672	218	-53	120	824	38
	March .....	790	231	79	135	808	41
	April .....	857	302	-47	168	1,038	39
	May .....	766	206	-13	227	757	39
	June .....	739	277	30	152	835	40
	July .....	778	422	-4	124	1,080	40
	August .....	782	305	71	105	911	42
	September .....	749	288	-70	133	974	40
	October .....	676	256	38	139	755	41
	November .....	753	274	61	110	857	43
	December .....	805	254	72	108	879	45
	Average .....	762	275	12	138	887	—
1999	January .....	775	218	-33	133	893	44
	February .....	726	248	-62	70	967	42
	March .....	683	249	-84	72	943	40
	April .....	679	234	26	185	702	40
	May .....	725	334	9	153	898	41
	June .....	706	228	63	151	721	42
	July .....	736	261	62	182	753	44
	August .....	701	236	-183	124	996	39
	September .....	702	258	68	136	756	41
	October .....	658	183	-7	130	719	41
	November .....	596	222	-5	60	763	40
	December .....	690	168	-147	154	852	36
	Average .....	698	237	-25	129	830	—

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

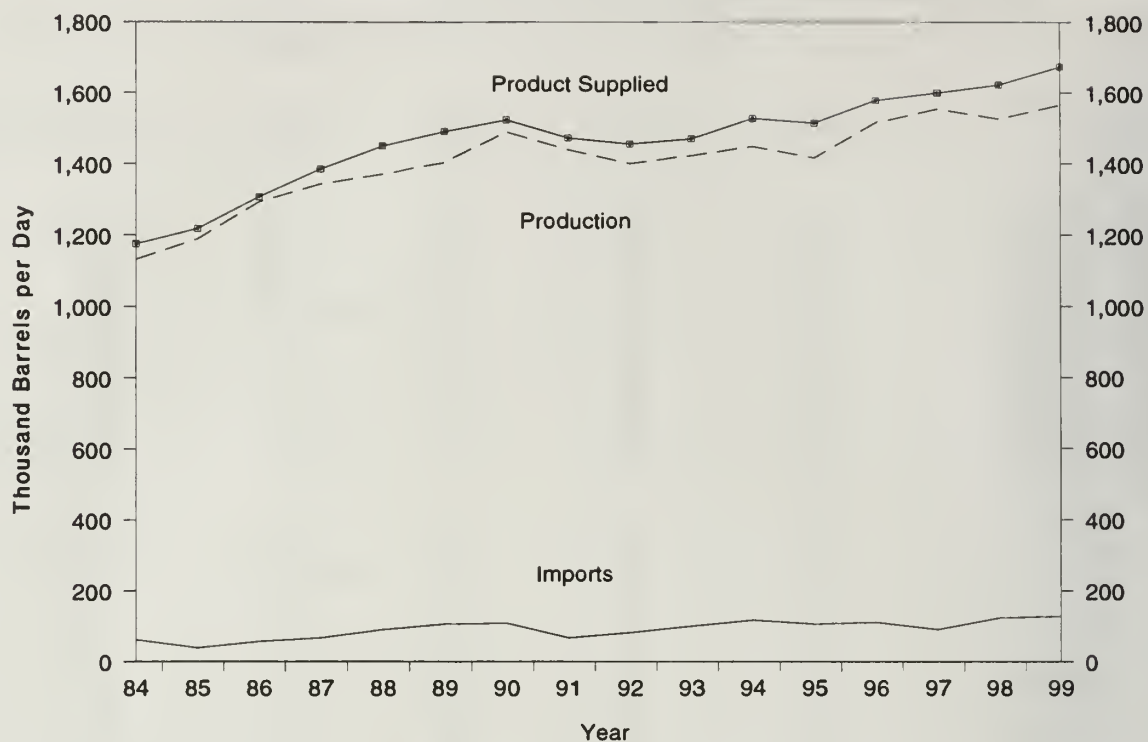
<sup>b</sup> Stocks are totals as of end of period.

(s)=Less than 500 barrels per day.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

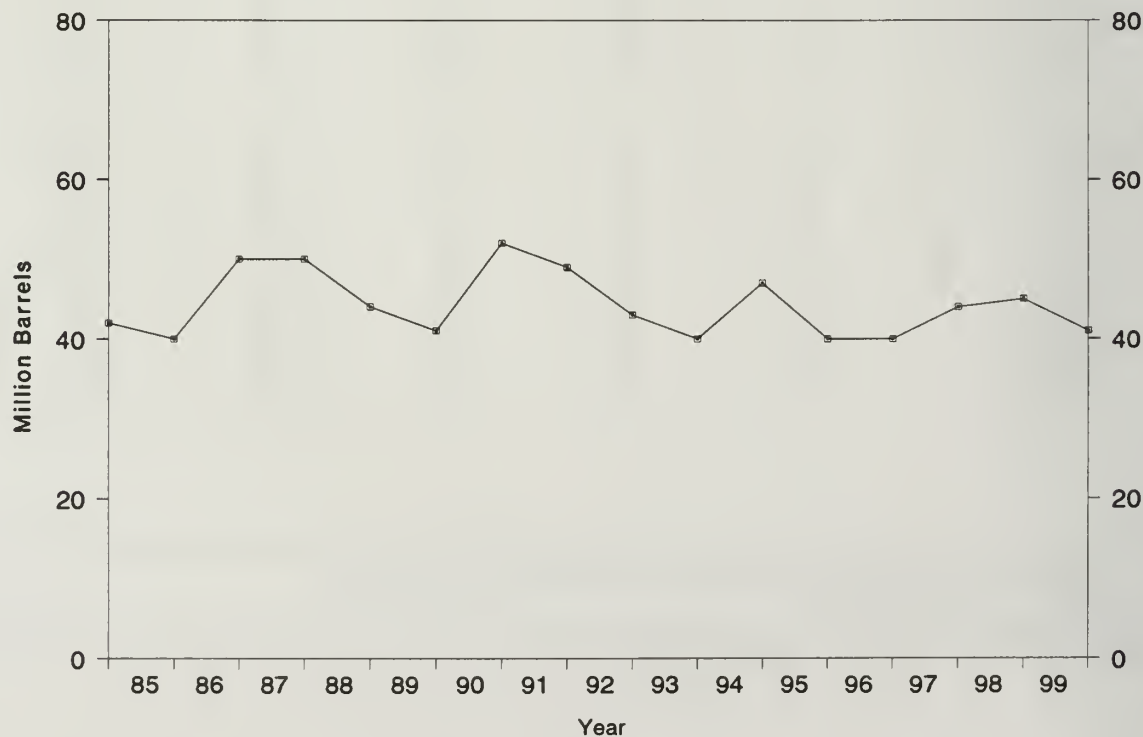
Source: See Summary Statistics Table and Figure Sources.

**Figure S11. Jet Fuel Supply and Disposition, 1984 - Present**



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S7. See Summary Statistics Table and Figure Sources.

**Figure S12. Jet Fuel Ending Stocks, 1984 - Present**



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S7. See Summary Statistics Table and Figure Sources.

**Table S7. Jet Fuel Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply			Disposition				Ending Stocks <sup>a</sup> (Million Barrels)	
		Production		Imports	Stock Change <sup>b</sup>	Exports	Product Supplied		Total	Kerosene Type
							Total	Kerosene-Type		
1984	Average .....	1,132	919	62	9	9	1,175	953	42	35
1985	Average .....	1,189	983	39	-4	13	1,218	1,005	40	34
1986	Average .....	1,293	1,097	57	25	18	1,307	1,105	50	43
1987	Average .....	1,343	1,138	67	(s)	24	1,385	1,181	50	42
1988	Average .....	1,370	1,164	90	-17	28	1,449	1,236	44	38
1989	Average .....	1,403	1,197	106	-8	27	1,489	1,284	41	34
1990	Average .....	1,488	1,311	108	31	43	1,522	1,340	52	46
1991	Average .....	1,438	1,274	67	-9	43	1,471	1,296	49	44
1992	Average .....	1,399	1,254	82	-16	43	1,454	1,310	43	39
1993	Average .....	1,422	1,309	100	-7	59	1,469	1,357	40	38
1994	Average .....	1,448	1,410	117	18	20	1,527	1,480	47	46
1995	Average .....	1,416	1,407	106	-19	26	1,514	1,497	40	39
1996	Average .....	1,515	1,513	111	(s)	48	1,578	1,575	40	39
1997	January .....	1,491	1,491	100	-101	78	1,615	1,614	37	37
	February .....	1,511	1,510	116	31	23	1,572	1,571	38	38
	March .....	1,488	1,487	106	55	11	1,529	1,528	39	39
	April .....	1,493	1,492	98	11	21	1,559	1,558	40	40
	May .....	1,515	1,514	91	46	9	1,551	1,551	41	41
	June .....	1,581	1,580	108	77	38	1,574	1,573	43	43
	July .....	1,619	1,618	86	-14	33	1,685	1,685	43	43
	August .....	1,580	1,579	103	7	27	1,648	1,648	43	43
	September .....	1,593	1,592	87	78	16	1,586	1,585	46	46
	October .....	1,581	1,580	77	19	40	1,599	1,599	46	46
	November .....	1,609	1,608	55	8	44	1,612	1,612	46	46
	December .....	1,588	1,588	63	-75	78	1,647	1,647	44	44
	Average .....	1,554	1,554	91	11	35	1,599	1,598	—	—
1998	January .....	1,513	1,512	85	3	37	1,559	1,558	44	44
	February .....	1,443	1,443	127	-61	25	1,606	1,605	42	42
	March .....	1,504	1,503	144	23	36	1,589	1,596	43	43
	April .....	1,524	1,523	106	-56	32	1,654	1,654	41	41
	May .....	1,494	1,493	151	54	25	1,567	1,568	43	43
	June .....	1,555	1,554	116	35	25	1,611	1,611	44	44
	July .....	1,504	1,503	117	-65	28	1,658	1,659	42	42
	August .....	1,608	1,608	146	141	8	1,605	1,605	46	46
	September .....	1,482	1,482	91	-17	26	1,564	1,565	46	46
	October .....	1,448	1,447	140	-102	22	1,667	1,668	43	43
	November .....	1,617	1,617	131	89	25	1,634	1,634	45	45
	December .....	1,611	1,611	130	-26	17	1,749	1,750	45	45
	Average .....	1,526	1,525	124	2	26	1,622	1,623	—	—
1999	January .....	1,594	1,594	132	3	26	1,697	1,698	45	45
	February .....	1,567	1,566	157	26	9	1,689	1,689	46	45
	March .....	1,521	1,520	85	-109	23	1,691	1,692	42	42
	April .....	1,642	1,641	162	126	29	1,647	1,652	46	46
	May .....	1,545	1,545	148	51	33	1,609	1,609	48	47
	June .....	1,542	1,541	65	-60	36	1,631	1,640	46	46
	July .....	1,551	1,550	155	22	39	1,644	1,648	46	46
	August .....	1,575	1,575	176	3	9	1,739	1,739	47	46
	September .....	1,600	1,600	152	74	34	1,643	1,645	49	49
	October .....	1,501	1,500	97	-154	28	1,724	1,725	44	44
	November .....	1,530	1,530	82	-89	64	1,637	1,640	41	41
	December .....	1,616	1,615	128	-25	53	1,717	1,717	41	40
	Average .....	1,565	1,565	128	-11	32	1,673	1,675	—	—

<sup>a</sup> Stocks are totals as of end of period.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>c</sup> In January 1981 and 1983, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.

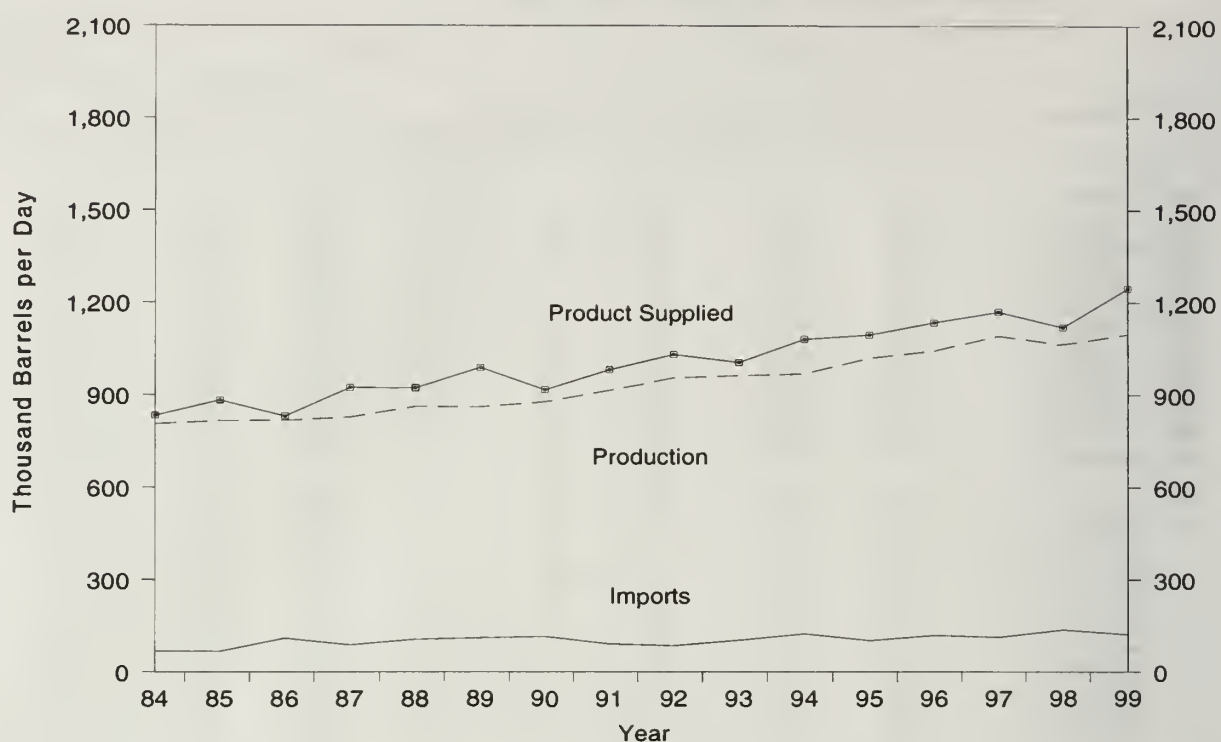
(s) = Less than 500 barrels per day.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

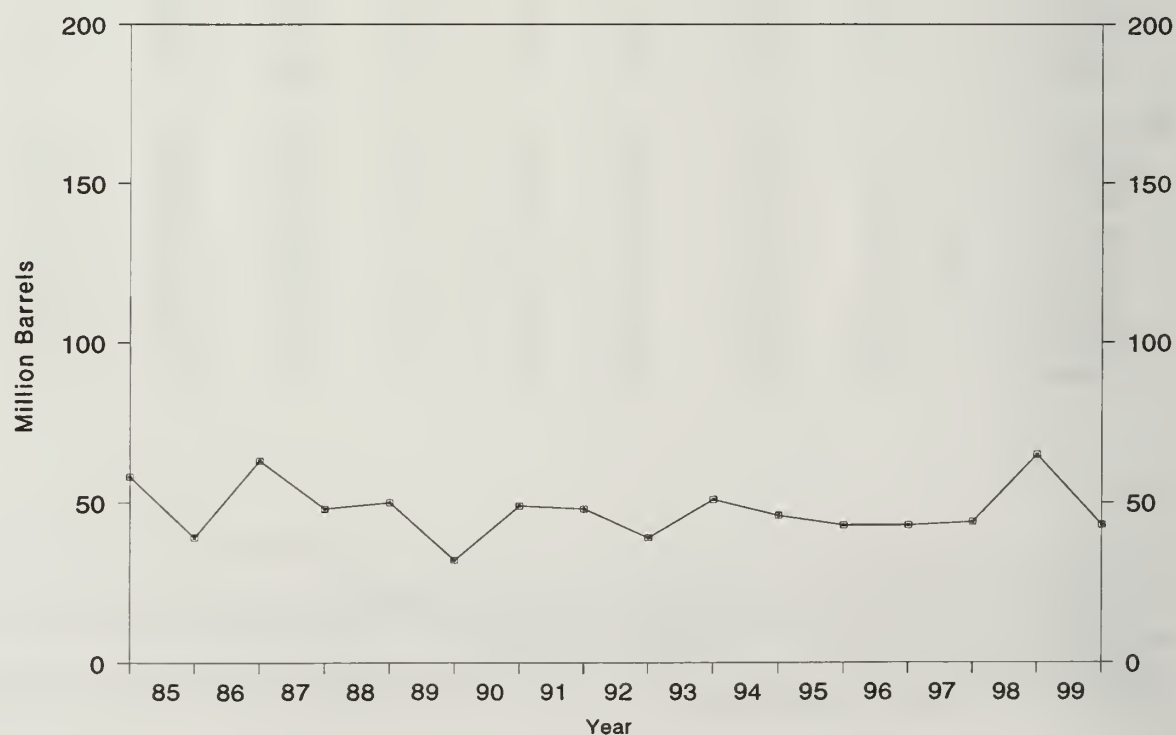


Figure S13. Propane/Propylene Supply and Disposition, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S8. See Summary Statistics Table and Figure Sources.

Figure S14. Propane/Propylene Ending Stocks, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S8. See Summary Statistics Table and Figure Sources.

**Table S8. Propane/Propylene Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks <sup>b</sup> (Million Barrels)
		Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	
1984	Average .....	806	67	7	4	30	833
1985	Average .....	816	67	-50	3	48	883
1986	Average .....	817	110	64	4	28	831
1987	Average .....	828	88	-41	8	24	924
1988	Average .....	863	106	7	8	31	923
1989	Average .....	862	111	-52	11	24	990
1990	Average .....	878	115	48	(s)	28	917
1991	Average .....	915	91	-3	(s)	28	982
1992	Average .....	956	85	-24	(s)	33	1,032
1993	Average .....	963	103	34	(s)	26	1,006
1994	Average .....	969	124	-13	0	24	1,082
1995	Average .....	1,021	102	-10	0	38	1,096
1996	Average .....	1,044	119	(s)	0	28	1,136
1997	January .....	1,039	149	-340	0	28	1,501
	February .....	1,044	126	-276	0	42	1,404
	March .....	1,059	114	92	0	40	1,041
	April .....	1,112	109	150	0	32	1,039
	May .....	1,114	92	252	0	23	930
	June .....	1,110	88	250	0	31	916
	July .....	1,083	87	231	0	24	916
	August .....	1,095	108	172	0	24	1,007
	September .....	1,110	89	30	0	16	1,152
	October .....	1,110	122	17	0	29	1,185
	November .....	1,099	114	-223	0	48	1,388
	December .....	1,127	159	-342	0	53	1,576
	Average .....	1,092	113	3	0	32	1,170
1998	January .....	1,060	137	-310	0	29	1,478
	February .....	1,052	204	-58	0	28	1,286
	March .....	1,086	132	-98	0	28	1,288
	April .....	1,112	183	252	0	22	1,021
	May .....	1,093	136	428	0	22	779
	June .....	1,059	179	336	0	13	889
	July .....	1,004	124	215	0	17	896
	August .....	1,056	157	186	0	15	1,012
	September .....	1,047	81	118	0	15	994
	October .....	1,047	123	-45	0	35	1,180
	November .....	1,086	92	-96	0	41	1,233
	December .....	1,060	108	-250	0	32	1,385
	Average .....	1,064	137	56	0	25	1,120
1999	January .....	1,041	118	-550	0	50	1,659
	February .....	1,050	125	-133	0	41	1,267
	March .....	1,031	135	-240	0	19	1,388
	April .....	1,073	116	126	0	13	1,051
	May .....	1,085	98	183	0	20	979
	June .....	1,105	92	156	0	23	1,018
	July .....	1,107	122	213	0	27	988
	August .....	1,112	113	108	0	32	1,086
	September .....	1,134	108	-34	0	20	1,256
	October .....	1,132	125	-93	0	65	1,286
	November .....	1,127	136	-64	0	34	1,293
	December .....	1,169	178	-375	0	49	1,672
	Average .....	1,097	122	-59	0	33	1,246

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are totals as of end of period.

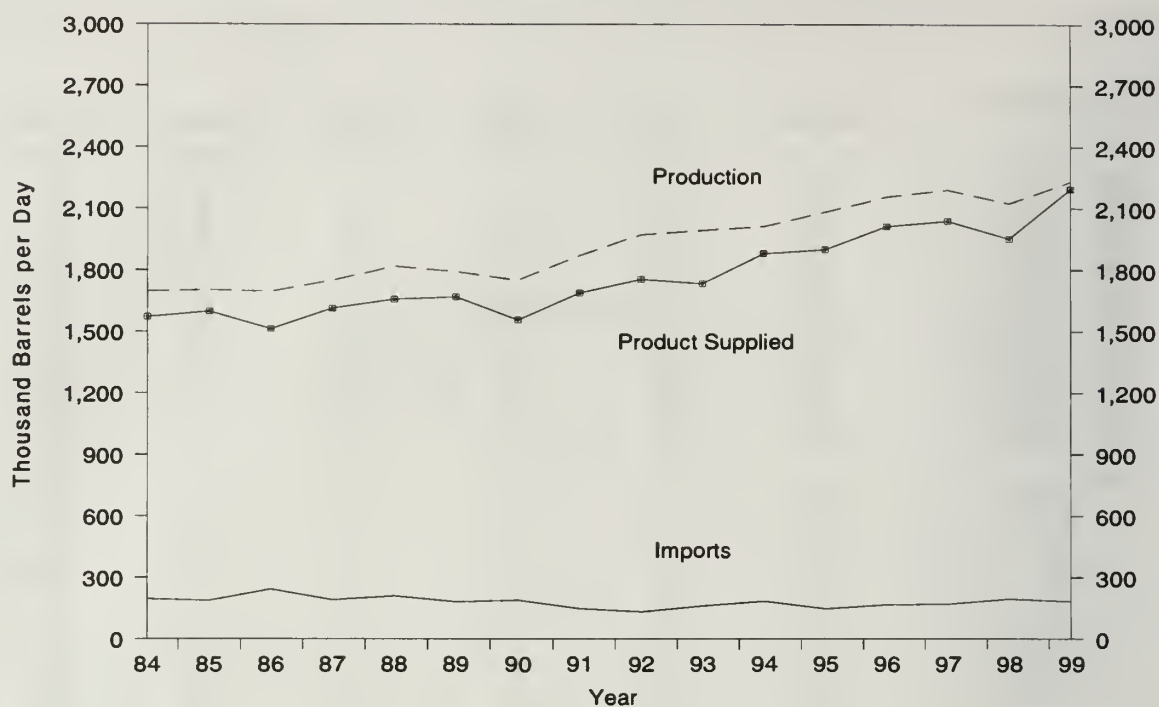
<sup>c</sup> In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.

(s) = Less than 500 barrels per day.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

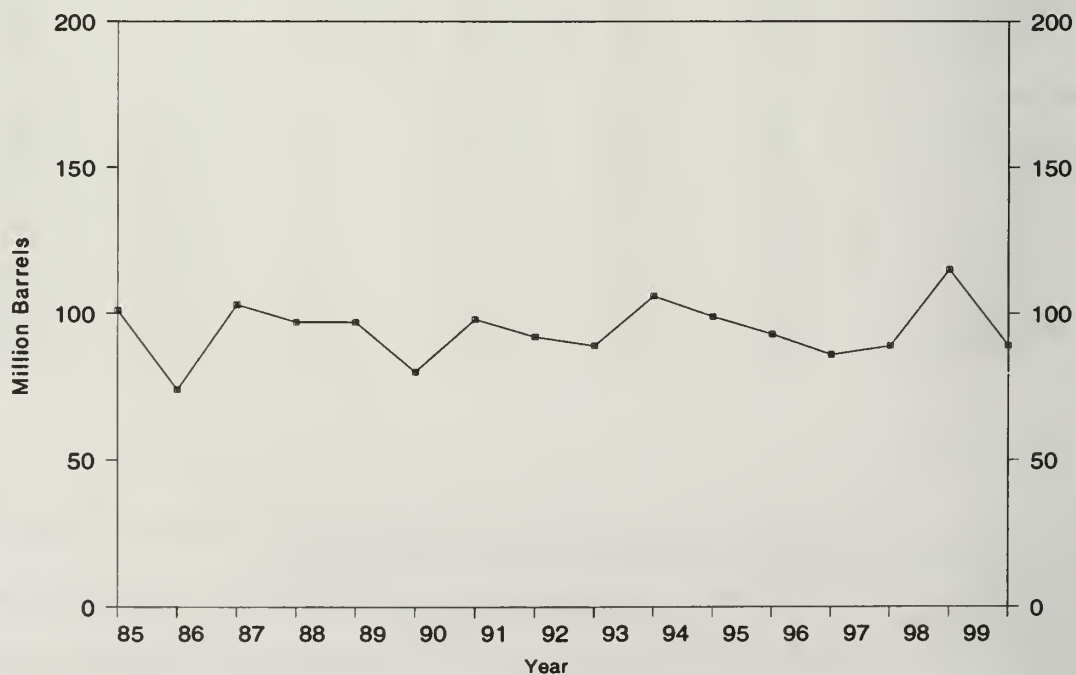
Source: See Summary Statistics Table and Figure Sources.

Figure S15. Liquefied Petroleum Gases Supply and Disposition, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S9. See Summary Statistics Table and Figure Sources.

Figure S16. Liquefied Petroleum Gases Ending Stocks, 1984 - Present



Source: Energy Information Administration, *Petroleum Supply Annual*, Table S9. See Summary Statistics Table and Figure Sources.



**Table S9. Liquefied Petroleum Gases Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition				Ending Stocks <sup>b</sup> (Million Barrels)
		Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Product Supplied	
1984	Average .....	1,697	195	<sup>c</sup> -19	291	48	1,572	101
1985	Average .....	1,704	187	-75	304	62	1,599	74
1986	Average .....	1,695	242	80	302	42	1,512	103
1987	Average .....	1,748	190	-15	304	38	1,612	97
1988	Average .....	1,817	209	1	321	49	1,656	97
1989	Average .....	1,791	181	-47	315	35	1,668	80
1990	Average .....	1,749	188	48	293	40	1,556	98
1991	Average .....	1,871	147	-15	304	41	1,689	92
1992	Average .....	1,972	131	-10	309	49	1,755	89
1993	Average .....	1,993	160	49	327	43	1,734	106
1994	Average .....	2,012	183	-19	296	38	1,880	99
1995	Average .....	2,082	146	-17	289	58	1,899	93
1996	Average .....	2,156	166	-19	278	51	2,012	86
1997	January .....	2,009	193	-543	344	36	2,365	69
	February .....	2,072	178	-450	321	78	2,301	57
	March .....	2,210	163	214	244	62	1,854	63
	April .....	2,355	169	349	211	41	1,923	74
	May .....	2,364	161	481	200	40	1,804	89
	June .....	2,369	160	534	203	43	1,748	105
	July .....	2,331	151	433	195	56	1,798	118
	August .....	2,348	175	408	190	37	1,888	131
	September .....	2,196	150	54	247	29	2,017	133
	October .....	2,074	168	-100	302	42	1,998	129
	November .....	1,926	155	-535	345	66	2,206	113
	December .....	2,020	205	-770	354	74	2,567	89
	Average .....	2,190	169	9	263	50	2,038	—
1998	January .....	2,000	200	-534	340	53	2,340	73
	February .....	2,088	277	-122	303	52	2,132	70
	March .....	2,262	192	-14	229	41	2,199	69
	April .....	2,414	234	527	193	39	1,889	85
	May .....	2,358	219	726	193	31	1,627	107
	June .....	2,245	249	546	193	28	1,727	124
	July .....	2,106	199	328	187	34	1,756	134
	August .....	2,220	196	407	190	25	1,793	147
	September .....	2,032	144	212	222	28	1,713	153
	October .....	1,983	168	-225	313	49	2,015	146
	November .....	1,945	118	-402	358	61	2,046	134
	December .....	1,835	133	-608	317	67	2,191	115
	Average .....	2,124	194	70	253	42	1,952	—
1999	January .....	1,871	173	-757	308	75	2,417	92
	February .....	1,987	163	-311	254	64	2,142	83
	March .....	2,144	172	-200	225	32	2,258	77
	April .....	2,355	165	276	201	21	2,023	85
	May .....	2,340	177	424	196	33	1,864	98
	June .....	2,402	164	331	177	37	2,021	108
	July .....	2,435	204	354	177	39	2,068	119
	August .....	2,402	172	259	179	47	2,089	127
	September .....	2,329	155	-89	223	58	2,293	124
	October .....	2,223	182	-273	275	81	2,322	116
	November .....	2,121	199	-151	306	47	2,118	111
	December .....	2,143	250	-712	334	61	2,710	89
	Average .....	2,230	182	-71	238	50	2,195	—

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are totals as of end of period.

<sup>c</sup> In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.

Notes: • Liquefied petroleum gases includes ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene. Beginning in January 1984, unfractionated stream is reported by individual product. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

**Table S10. Other Petroleum Products Supply and Disposition, 1984 - Present**  
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition				Ending Stocks <sup>b</sup> (Million Barrels)
		Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Products Supplied	
1984	Average .....	2,500	503	<sup>c</sup> -32	791	236	2,007	198
1985	Average .....	2,532	550	22	886	227	1,947	206
1986	Average .....	2,704	504	-15	888	291	2,045	201
1987	Average .....	2,737	543	-1	829	264	2,187	200
1988	Average .....	2,773	645	22	799	294	2,303	208
1989	Average .....	2,771	627	12	797	305	2,285	213
1990	Average .....	2,842	705	-32	887	289	2,402	201
1991	Average .....	2,826	675	18	936	277	2,269	208
1992	Average .....	2,928	707	-3	906	263	2,470	<sup>c</sup> 207
1993	Average .....	3,035	770	<sup>c</sup> -2	1,081	300	2,426	206
1994	Average .....	2,973	761	24	861	329	2,518	215
1995	Average .....	3,031	708	-23	958	348	2,457	206
1996	Average .....	3,108	879	-11	1,014	376	2,608	202
1997	January .....	2,945	1,154	354	831	403	2,511	213
	February .....	2,953	1,010	239	944	332	2,448	220
	March .....	3,078	955	514	697	391	2,431	236
	April .....	3,136	1,054	-122	1,203	395	2,715	232
	May .....	3,329	1,156	127	1,089	446	2,823	236
	June .....	3,355	936	-468	1,345	417	2,997	222
	July .....	3,402	903	-214	1,069	380	3,069	215
	August .....	3,426	886	-83	994	460	2,940	213
	September .....	3,390	836	101	841	450	2,834	216
	October .....	3,227	957	-87	915	381	2,976	213
	November .....	3,078	754	-7	919	369	2,551	213
	December .....	3,113	744	3	981	396	2,476	213
	Average .....	3,204	945	30	985	402	2,733	—
1998	January .....	3,108	782	415	702	420	2,352	226
	February .....	3,100	794	384	659	406	2,446	236
	March .....	3,081	825	269	770	387	2,481	245
	April .....	3,153	975	-145	1,209	378	2,686	240
	May .....	3,285	1,014	-75	1,095	402	2,876	238
	June .....	3,365	969	-147	1,155	412	2,914	234
	July .....	3,492	847	-271	1,182	431	2,998	225
	August .....	3,575	697	-5	953	300	3,023	225
	September .....	3,344	962	-33	1,012	370	2,957	224
	October .....	3,240	1,012	-190	1,259	357	2,825	218
	November .....	3,234	978	181	1,000	382	2,649	224
	December .....	3,043	808	-138	1,012	312	2,665	219
	Average .....	3,253	888	18	1,002	380	2,741	—
1999	January .....	3,097	891	390	759	307	2,532	232
	February .....	3,159	900	276	775	272	2,736	239
	March .....	3,145	815	375	593	302	2,691	251
	April .....	3,108	1,067	-76	1,041	352	2,859	249
	May .....	3,363	1,007	21	1,427	321	2,602	249
	June .....	3,216	1,132	-520	1,387	311	3,170	234
	July .....	3,271	981	-302	1,295	325	2,935	224
	August .....	3,465	1,040	-190	1,083	359	3,253	218
	September .....	3,373	981	-139	1,094	345	3,054	214
	October .....	3,124	929	-192	1,105	327	2,812	208
	November .....	3,120	743	-110	856	396	2,722	205
	December .....	3,083	835	-292	1,300	439	2,470	196
	Average .....	3,211	943	-64	1,061	338	2,819	—

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are totals as of end of period.

<sup>c</sup> In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. Bulk terminal, pipeline, and merchant-producer stocks of oxygenates were added beginning in January 1993. See Summary Statistics Explanatory Note 2.

Notes: • Other petroleum products includes pentanes plus, other hydrocarbons and oxygenates, unfinished oils, gasoline blending components and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, and liquefied petroleum gases, and crude oil product supplied. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

# Summary Statistics Tables and Figures Sources

Information about petroleum supply and disposition at the National level are presented in the Summary Statistics tables. Industry terminology and product definitions are listed alphabetically in the Glossary.

The data presented in these tables are from several sources and represent different levels of timeliness and data finality.

- U.S. Department of Energy, Energy Information Administration (EIA), *Petroleum Supply Annual* (1984 through 1999).
- Data on crude oil production are reported to the EIA by State government agencies. Data on crude oil production for Federal offshore areas are reported to the EIA by the Minerals Management Service of the U.S. Department of the Interior and the Conservation Committee of California Oil Producers. Crude oil production data for 1999 reflect data received as of April 2000. Data for 1999 received after April will be published as an appendix in the following year's *Petroleum Supply Annual*.
- Data on exports of crude oil and petroleum products are received from the U.S. Bureau of the Census. Export statistics reflect exports of domestic and foreign merchandise from the United States (the 50 States and the District of Columbia) to foreign countries and U.S. possessions.



# Summary Statistics Explanatory Notes

The following notes are provided to assist in understanding and interpreting the data presented in the Summary Statistics section of this publication.

## Note 1. Domestic Crude Oil Production

The Energy Information Administration (EIA) collects monthly crude oil production data on an ongoing basis. Data on crude oil production for States are reported to the EIA by State government agencies. Data on crude oil production for Federal offshore areas are reported to the EIA by the Minerals Management Service of the U.S. Department of the Interior.

Currently, all except five crude oil producing States (New York, Pennsylvania, Ohio, Virginia, and West Virginia) report production on a monthly basis. These five States report crude oil on an annual basis. Estimates of monthly crude oil production for these five States are made by the EIA using data reported on Form EIA-182, "Domestic Crude Oil First Purchase Report."

After the end of each calendar year, the monthly crude oil production estimates are updated using annual reports from various State agencies, and the Minerals Management Service. The EIA incorporates production data into its Crude Oil Production System (COPS) as the data are received from the reporting agencies. Tables S1 and S2 present the 1999 crude oil production data received by the EIA as of April 2000. Crude oil production data for 1999 received after April 2000 will be published later as an appendix in the following year's *Petroleum Supply Annual* (PSA). Table C1 of this publication presents the 1998 crude oil production a year after it was published in the PSA 1998.

## Note 2. Frames Maintenance

In January 1981 and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock change calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been as listed below.

- Crude Oil: 1982- 645 (Total) and 351 (Other Primary).
- Crude Oil and Petroleum Products: 1980- 1,425; and 1982- 1,461.
- Motor Gasoline: 1980- 263 (Total) and 214 (Finished); 1982- 244 (Total) and 202 (Finished).
- Distillate Fuel Oil: 1980- 205; and 1982- 186.
- Residual Fuel Oil: 1980- 91; and 1982- 69.

- Jet Fuel: 1980- 42 (Total) and 36 (Kerosene-type); and 1982-39 (Total) and 32 (Kerosene-type).
- Propane/Propylene: 1980- 69; and 1982- 57.
- Liquefied Petroleum Gases: 1980- 128; and 1982-102.
- Other Petroleum Products: 1980- 207; and 1982-219.

Stock change calculations beginning in 1981 and 1983 were made using new basis stock levels.

Stocks of Alaskan crude oil in-transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock change calculations. Using the expanded coverage (new basis), 1980 end-of-year crude oil stocks would have been 488 million barrels (Total) and 380 million barrels (Other Primary).

Beginning with January 1984, natural gas liquids supply and disposition data were collected on a component basis rather than a product basis. This change affected stocks reported and stock change calculations. Under the new basis, end-of-year 1983 stocks would have been:

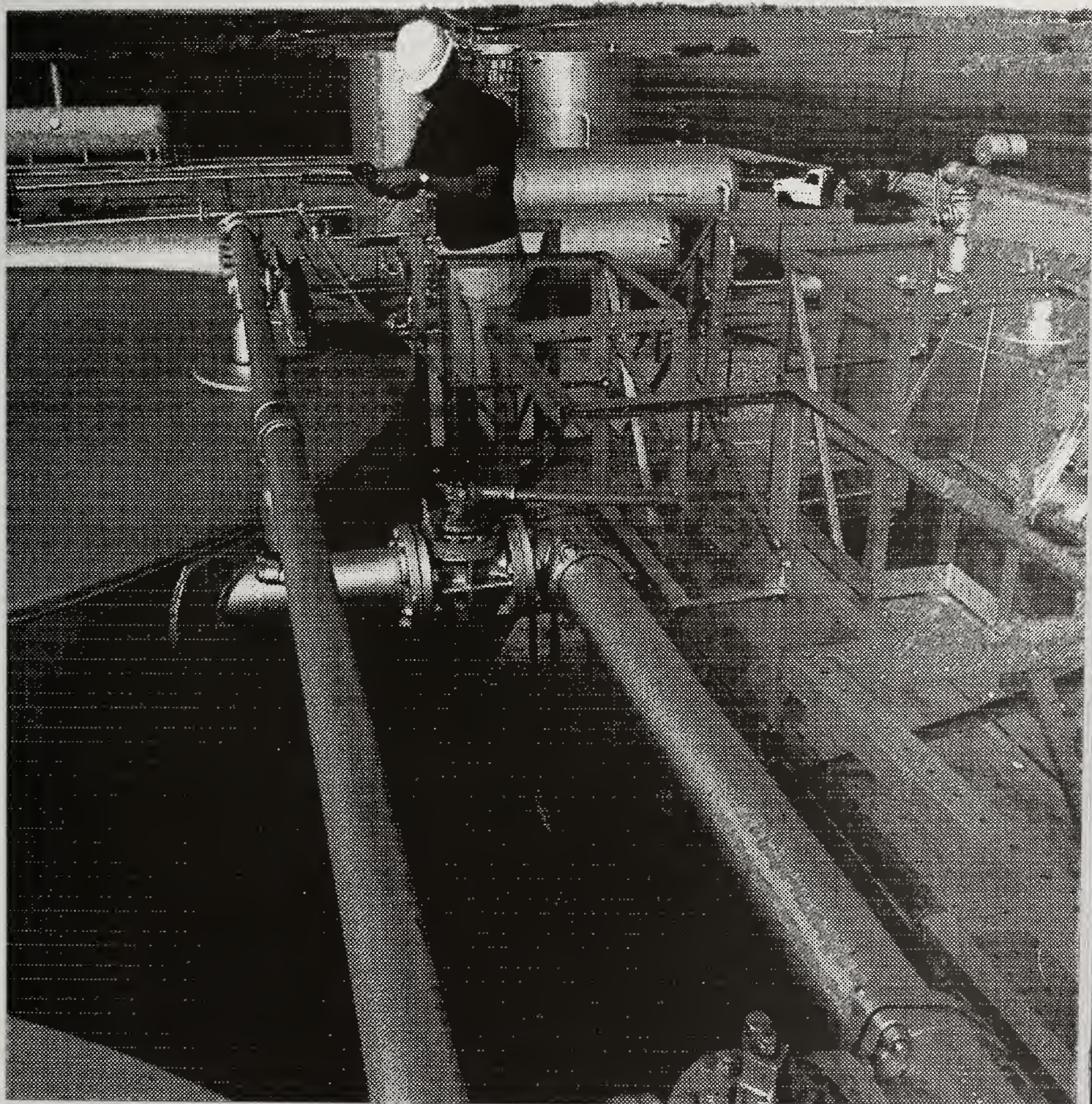
- Propane/Propylene: 1983- 55.
- Liquefied Petroleum Gases: 1983- 108.
- Other Petroleum Products: 1983- 210.

In response to changes in the Clean Air Act Amendments of 1990 requiring that all gasoline sold in carbon monoxide nonattainment areas have an oxygen content of 2.7 percent (by weight) during winter months, the Energy Information Administration (EIA) conducted a frame identifier survey in 1991 of companies that produce, blend, store, or import oxygenates. The purpose of this survey was to (1) identify all U.S. producers, blenders, storers, and importers of oxygenates; and (2) collect supply and blending data for 1990 and end of 1990 inventory data on those oxygenates blended into motor gasoline. A summary of the results from the identification survey were published in the *Weekly Petroleum Status Report* dated February 12, 1992 and in the February 1992 issue of the *Petroleum Supply Monthly*.

In order to continue to provide relevant information about U.S. and regional gasoline supply, the EIA conducted a second frame identifier survey of these companies during 1992. As a result, a number of respondents were added to the monthly surveys effective in January 1993: 19 blenders, 25 stock holders, and 8 importers. This change did not affect stocks reported and therefore did not cause a new basis stock level to be calculated.



## Detailed Statistics



*At some locations, oil skimmers and knockout tanks (in background) are used to remove waste water from the crude oil. The crude oil is then put into storage tanks and gauged.*



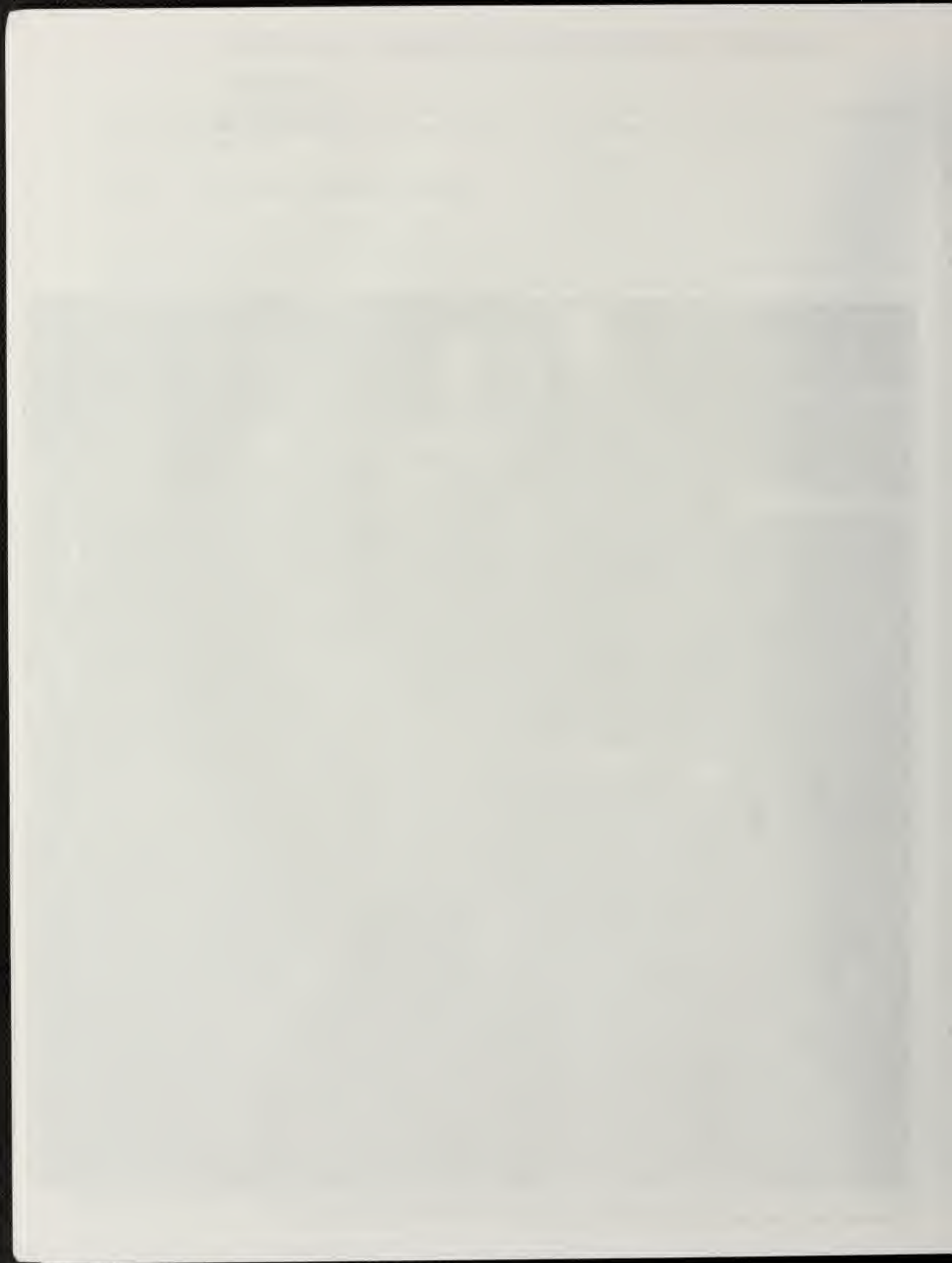




Table 1. U.S. Petroleum Balance, 1999

Commodity		Thousand Barrels	Thousand Barrels per Day
<b>Crude Oil</b>			
Field Production			
(1)	Alaska .....	383,198	1,050
(2)	Lower 48 States .....	1,763,533	4,832
(3)	<b>Total U.S.</b> .....	<b>2,146,732</b>	<b>5,881</b>
Net Imports			
(4)	Imports (Gross Excluding Strategic Petroleum Reserve (SPR)) .....	3,183,622	8,722
(5)	SPR Imports .....	3,041	8
(6)	Exports .....	43,031	118
(7)	<b>Imports (Net Including SPR)</b> .....	<b>3,143,632</b>	<b>8,613</b>
Other Sources			
(8)	SPR Stock Change (Withdrawal (+), Addition (-)) .....	4,164	11
(9)	Other Stock Change (Withdrawal (+), Addition (-)) .....	39,061	107
(10)	Product Supplied and Losses .....	-10	(s)
(11)	Unaccounted for <sup>a</sup> .....	69,872	191
(12)	<b>Total Other Sources</b> .....	<b>113,087</b>	<b>310</b>
(13)	<b>Crude Input to Refineries</b> .....	<b>5,403,450</b>	<b>14,804</b>
(13) = (3) + (7) + (12)			
<b>Natural Gas Liquids (NGL)</b>			
(14)	Field Production <sup>b</sup> .....	739,713	2,027
(15)	Net Imports <sup>c</sup> .....	14,047	38
(16)	Stock Change (Withdrawal (+), Addition (-)) <sup>c</sup> .....	3,296	9
(17)	<b>Total NGL Supply</b> .....	<b>757,056</b>	<b>2,074</b>
<b>Other Liquids</b>			
Unfinished Oils and Gasoline Blending Components, Total			
(18)	Stock Change (Withdrawal (+), Addition (-)) .....	9,734	27
(19)	Net Imports .....	207,891	570
(20)	Other Liquids New Supply(Field Production) .....	72,660	199
(21)	Refinery Processing Gain <sup>a</sup> .....	323,490	886
(22)	Crude Oil Product Supplied .....	0	0
(23)	<b>Total Other Liquids</b> .....	<b>613,775</b>	<b>1,682</b>
(23) = (18) through (22)			
(24)	<b>Total Production of Products</b> .....	<b>6,774,281</b>	<b>18,560</b>
(24) = (13) + (17) + (23)			
<b>Net Imports of Refined Products</b>			
(25)	Imports (Gross) .....	536,867	1,471
(26)	Exports .....	284,379	779
(27)	<b>Imports (Net)</b> .....	<b>252,488</b>	<b>692</b>
(28)	<b>Total New Supply of Products</b> .....	<b>7,026,769</b>	<b>19,251</b>
(28) = (24) + (27)			
(29)	Refined Products Stock Change (Withdrawal (+), Addition (-)) .....	97,789	268
(30)	<b>Total Petroleum Products Supplied for Domestic Use</b> .....	<b>7,124,558</b>	<b>19,519</b>
(30) = (28) + (29)			
(31)	Finished Motor Gasoline .....	3,077,242	8,431
(32)	Distillate Fuel Oil .....	1,303,779	3,572
(33)	Residual Fuel Oil .....	302,998	830
(34)	Jet Fuel .....	610,501	1,673
(35)	Liquefied Petroleum Gases .....	801,176	2,195
(36)	Other <sup>d</sup> .....	1,028,863	2,819
(37)	Crude Oil .....	0	0
(38)	<b>Total Products Supplied</b> .....	<b>7,124,558</b>	<b>19,519</b>
(38) = (31) through (37)			
<b>Ending Stocks, All Oils</b> .....			
(39)	Crude Oil (Excluding SPR) .....	284,482	—
(40)	Strategic Petroleum Reserve <sup>e</sup> .....	567,241	—
(41)	Finished Motor Gasoline .....	154,093	—
(42)	Distillate Fuel Oil .....	125,463	—
(43)	Residual Fuel Oil .....	35,830	—
(44)	Jet Fuel .....	40,501	—
(45)	Liquefied Petroleum Gases .....	89,339	—
(46)	Other <sup>d</sup> .....	195,982	—
(47)	<b>Total Stocks</b> .....	<b>1,492,931</b>	<b>—</b>
(47) = (39) through (46)			

<sup>a</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Refinery processing gain represents the volumetric amount by which total output is greater than input for a given period of time.

<sup>b</sup> Includes fuel ethanol blended into finished motor gasoline.

<sup>c</sup> Includes products in the pentanes plus category only.

<sup>d</sup> Includes pentanes plus, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, and liquefied petroleum gases.

<sup>e</sup> Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA), Monthly Petroleum Supply Reporting System. • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 2. U.S. Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels)

Commodity	Supply				Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Unaccounted For Crude Oil <sup>a</sup>	Stock Change <sup>b</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>c</sup>	
Crude Oil .....	2,146,732	—	3,186,663	69,872	-43,225	10	5,403,450	43,031	0	851,723
Natural Gas Liquids and LRGs .....	675,120	249,574	81,388	—	-29,039	—	135,756	19,191	880,174	94,721
Pentanes Plus .....	110,630	—	15,090	—	-3,296	—	48,974	1,043	78,999	5,382
Liquefied Petroleum Gases .....	564,490	249,574	66,298	—	-25,743	—	86,782	18,147	801,176	89,339
Ethane/Ethylene .....	246,545	9,836	11,799	—	-180	—	0	0	268,360	20,856
Propane/Propylene .....	192,993	207,579	44,624	—	-21,607	—	0	11,984	454,819	43,026
Normal Butane/Butylene .....	56,674	29,216	5,655	—	-2,873	—	44,856	6,164	43,398	19,272
Isobutane/Isobutylene .....	68,278	2,943	4,220	—	-1,083	—	41,926	0	34,598	6,185
Other Liquids .....	72,660	—	222,454	—	-9,734	—	338,445	14,563	-48,160	139,348
Other Hydrocarbons/Oxygenates .....	116,638	—	27,457	—	-533	—	134,113	10,515	0	13,639
Unfinished Oils .....	—	—	115,771	—	-4,582	—	169,780	0	-49,427	86,254
Motor Gasoline Blend. Comp. ....	-43,978	—	79,226	—	-4,609	—	35,809	4,048	0	39,234
Aviation Gasoline Blend. Comp. ....	—	—	0	—	-10	—	-1,257	0	1,267	221
Finished Petroleum Products .....	64,593	5,951,567	470,569	—	-72,046	—	—	266,232	6,292,544	407,139
Finished Motor Gasoline .....	64,593	2,895,989	139,298	—	-17,703	—	—	40,342	3,077,242	154,093
Reformulated .....	—	936,002	69,445	—	-2,827	—	—	175	1,008,099	41,437
Oxygenated .....	206,150	39,389	0	—	2	—	—	402	245,135	904
Other .....	-141,557	1,920,598	69,853	—	-14,878	—	—	39,765	1,824,007	111,752
Finished Aviation Gasoline .....	—	7,452	76	—	-232	—	—	0	7,760	1,594
Jet Fuel .....	—	571,271	46,736	—	-4,193	—	—	11,699	610,501	40,501
Naphtha-Type .....	—	197	4	—	20	—	—	943	-762	54
Kerosene-Type .....	—	571,074	46,732	—	-4,213	—	—	10,756	611,263	40,447
Kerosene .....	—	24,353	476	—	-2,072	—	—	279	26,622	4,871
Distillate Fuel Oil .....	—	1,240,783	91,428	—	-30,612	—	—	59,044	1,303,779	125,463
0.05 percent sulfur and under .....	—	841,998	51,381	—	-7,467	—	—	13,491	887,355	69,310
Greater than 0.05 percent sulfur ...	—	398,785	40,047	—	-23,145	—	—	45,553	416,424	56,153
Residual Fuel Oil .....	—	254,839	86,343	—	-9,079	—	—	47,263	302,998	35,830
Naphtha For Petro. Feed. Use .....	—	69,718	26,123	—	171	—	—	0	95,670	2,264
Other Oils For Petro. Feed. Use .....	—	78,819	60,053	—	-380	—	—	0	139,252	1,687
Special Naphthas .....	—	31,396	2,140	—	144	—	—	5,687	27,705	2,351
Lubricants .....	—	66,784	3,973	—	-1,360	—	—	10,304	61,813	11,818
Waxes .....	—	7,075	971	—	-16	—	—	1,301	6,761	977
Petroleum Coke .....	—	260,115	347	—	-2,076	—	—	88,505	174,033	7,124
Asphalt and Road Oil .....	—	184,280	12,542	—	-4,493	—	—	1,735	199,580	16,858
Still Gas .....	—	239,520	0	—	0	—	—	0	239,520	0
Miscellaneous Products .....	—	19,173	63	—	-145	—	—	73	19,308	1,708
<b>Total .....</b>	<b>2,959,105</b>	<b>6,201,141</b>	<b>3,961,074</b>	<b>69,872</b>	<b>-154,044</b>	<b>10</b>	<b>5,877,651</b>	<b>343,017</b>	<b>7,124,558</b>	<b>1,492,931</b>

<sup>a</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>c</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 3. U.S. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Unaccounted For Crude Oil <sup>a</sup>	Stock Change <sup>b</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>c</sup>
Crude Oil .....	5,881	—	8,731	191	-118	(s)	14,804	118	0
Natural Gas Liquids and LRGs .....	1,850	684	223	—	-80	—	372	53	2,411
Pentanes Plus .....	303	—	41	—	-9	—	134	3	216
Liquefied Petroleum Gases .....	1,547	684	182	—	-71	—	238	50	2,195
Ethane/Ethylene .....	675	27	32	—	(s)	—	0	0	735
Propane/Propylene .....	529	569	122	—	-59	—	0	33	1,246
Normal Butane/Butylene .....	155	80	15	—	-8	—	123	17	119
Isobutane/Isobutylene .....	187	8	12	—	-3	—	115	0	95
Other Liquids .....	199	—	609	—	-27	—	927	40	-132
Other Hydrocarbons/Oxygenates .....	320	—	75	—	-1	—	367	29	0
Unfinished Oils .....	—	—	317	—	-13	—	465	0	-135
Motor Gasoline Blend. Comp. ....	-120	—	217	—	-13	—	98	11	0
Aviation Gasoline Blend. Comp. ....	—	—	0	—	(s)	—	-3	0	3
Finished Petroleum Products .....	177	16,306	1,289	—	-197	—	—	729	17,240
Finished Motor Gasoline .....	177	7,934	382	—	-49	—	—	111	8,431
Reformulated .....	—	2,564	190	—	-8	—	—	(s)	2,762
Oxygenated .....	565	108	0	—	(s)	—	—	1	672
Other .....	-388	5,262	191	—	-41	—	—	109	4,997
Finished Aviation Gasoline .....	—	20	(s)	—	-1	—	—	0	21
Jet Fuel .....	—	1,565	128	—	-11	—	—	32	1,673
Naphtha-Type .....	—	1	(s)	—	(s)	—	—	3	-2
Kerosene-Type .....	—	1,565	128	—	-12	—	—	29	1,675
Kerosene .....	—	67	1	—	-6	—	—	1	73
Distillate Fuel Oil .....	—	3,399	250	—	-84	—	—	162	3,572
0.05 percent sulfur and under .....	—	2,307	141	—	-20	—	—	37	2,431
Greater than 0.05 percent sulfur ..	—	1,093	110	—	-63	—	—	125	1,141
Residual Fuel Oil .....	—	698	237	—	-25	—	—	129	830
Naphtha For Petro. Feed. Use .....	—	191	72	—	(s)	—	—	0	262
Other Oils For Petro. Feed. Use .....	—	216	165	—	-1	—	—	0	382
Special Naphthas .....	—	86	6	—	(s)	—	—	16	76
Lubricants .....	—	183	11	—	-4	—	—	28	169
Waxes .....	—	19	3	—	(s)	—	—	4	19
Petroleum Coke .....	—	713	1	—	-6	—	—	242	477
Asphalt and Road Oil .....	—	505	34	—	-12	—	—	5	547
Still Gas .....	—	656	0	—	0	—	—	0	656
Miscellaneous Products .....	—	53	(s)	—	(s)	—	—	(s)	53
<b>Total .....</b>	<b>8,107</b>	<b>16,989</b>	<b>10,852</b>	<b>191</b>	<b>-422</b>	<b>(s)</b>	<b>16,103</b>	<b>940</b>	<b>19,519</b>

<sup>a</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>c</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.

(s) = Less than 500 barrels per day.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 4. PAD District I—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>	
Crude Oil .....	8,048	—	548,160	10,028	-1,517	-2,423	0	564,945	2,197	0	12,037
Natural Gas Liquids and LRGs .....	9,395	15,092	8,838	—	38,532	-357	—	1,572	675	69,967	6,812
Pentanes Plus .....	1,068	—	0	—	0	-14	—	0	18	1,064	20
Liquefied Petroleum Gases .....	8,327	15,092	8,838	—	38,532	-343	—	1,572	658	68,902	6,792
Ethane/Ethylene .....	2,835	0	0	—	0	0	—	0	0	2,835	0
Propane/Propylene .....	3,689	18,799	8,321	—	38,042	3	—	0	408	68,440	5,072
Normal Butane/Butylene .....	1,334	-2,084	317	—	378	-345	—	745	250	-705	1,526
Isobutane/Isobutylene .....	469	-1,623	200	—	112	-1	—	827	0	-1,668	194
Other Liquids .....	4,268	—	101,495	—	3,286	-5,351	—	122,898	640	-9,138	17,269
Other Hydrocarbons/Oxygenates ..	22,170	—	5,937	—	0	-183	—	27,686	604	0	2,051
Unfinished Oils .....	—	—	22,554	—	-765	-1,186	—	33,379	0	-10,404	9,360
Motor Gasoline Blend. Comp. ....	-17,902	—	73,004	—	4,051	-3,952	—	63,069	36	0	5,715
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	-30	—	-1,236	0	1,266	143
Finished Petroleum Products .....	18,933	700,368	313,864	—	997,166	-44,049	—	—	11,757	2,062,623	126,587
Finished Motor Gasoline .....	18,933	371,408	125,913	—	583,909	-6,051	—	—	490	1,105,723	46,009
Reformulated .....	—	234,759	65,915	—	121,450	-4,237	—	—	51	426,310	18,045
Oxygenated .....	10,308	356	0	—	0	-247	—	—	2	10,908	78
Other .....	8,625	136,293	59,998	—	462,459	-1,567	—	—	437	668,505	27,886
Finished Aviation Gasoline .....	—	124	4	—	1,103	-106	—	—	0	1,337	154
Jet Fuel .....	—	41,692	22,213	—	158,516	-1,304	—	—	2,036	221,689	9,617
Naphtha-Type .....	—	0	0	—	0	0	—	—	18	-18	0
Kerosene-Type .....	—	41,692	22,213	—	158,516	-1,304	—	—	2,018	221,707	9,617
Kerosene .....	—	4,771	475	—	1,370	-1,607	—	—	107	8,116	2,296
Distillate Fuel Oil .....	—	157,418	79,490	—	219,325	-27,903	—	—	2,571	481,565	48,464
0.05 percent sulfur and under ...	—	78,397	44,885	—	138,018	-7,105	—	—	142	268,263	16,063
Greater than 0.05 percent sulfur	—	79,021	34,605	—	81,307	-20,798	—	—	2,429	213,302	32,401
Residual Fuel Oil .....	—	39,086	66,826	—	16,121	-5,996	—	—	2,204	125,825	14,066
Petrochemical Feedstocks <sup>e</sup> .....	—	4,804	2,755	—	1,243	196	—	—	0	8,606	610
Special Naphthas .....	—	668	602	—	1,290	-18	—	—	235	2,343	81
Lubricants .....	—	6,104	3,516	—	10,411	-426	—	—	1,638	18,819	2,064
Waxes .....	—	-8	459	—	15	185	—	—	294	-13	246
Petroleum Coke .....	—	18,504	0	—	0	-95	—	—	1,872	16,727	266
Asphalt and Road Oil .....	—	32,594	11,611	—	3,863	-931	—	—	274	48,725	2,641
Still Gas .....	—	22,393	0	—	0	0	—	—	0	22,393	0
Miscellaneous Products .....	—	810	0	—	0	7	—	—	36	767	73
<b>Total .....</b>	<b>40,644</b>	<b>715,460</b>	<b>972,357</b>	<b>10,028</b>	<b>1,037,467</b>	<b>-52,180</b>	<b>0</b>	<b>689,415</b>	<b>15,270</b>	<b>2,123,452</b>	<b>162,705</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 5. PAD District I—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>
Crude Oil .....	22	—	1,502	27	-4	-7	0	1,548	6	0
Natural Gas Liquids and LRGs .....	26	41	24	—	106	-1	—	4	2	192
Pentanes Plus .....	3	—	0	—	0	(s)	—	0	(s)	3
Liquefied Petroleum Gases .....	23	41	24	—	106	-1	—	4	2	189
Ethane/Ethylene .....	8	0	0	—	0	0	—	0	0	8
Propane/Propylene .....	10	52	23	—	104	(s)	—	0	1	188
Normal Butane/Butylene .....	4	-6	1	—	1	-1	—	2	1	-2
Isobutane/Isobutylene .....	1	-4	1	—	(s)	(s)	—	2	0	-5
Other Liquids .....	12	—	278	—	9	-15	—	337	2	-25
Other Hydrocarbons/Oxygenates ....	61	—	16	—	0	-1	—	76	2	0
Unfinished Oils .....	—	—	62	—	-2	-3	—	91	0	-29
Motor Gasoline Blend. Comp. ....	-49	—	200	—	11	-11	—	173	(s)	0
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	(s)	—	-3	0	3
<b>Finished Petroleum Products .....</b>	<b>52</b>	<b>1,919</b>	<b>860</b>	<b>—</b>	<b>2,732</b>	<b>-121</b>	<b>—</b>	<b>—</b>	<b>32</b>	<b>5,651</b>
Finished Motor Gasoline .....	52	1,018	345	—	1,600	-17	—	—	1	3,029
Reformulated .....	—	643	181	—	333	-12	—	—	(s)	1,168
Oxygenated .....	28	1	0	—	0	-1	—	—	(s)	30
Other .....	24	373	164	—	1,267	-4	—	—	1	1,832
Finished Aviation Gasoline .....	—	(s)	(s)	—	3	(s)	—	—	0	4
Jet Fuel .....	—	114	61	—	434	-4	—	—	6	607
Naphtha-Type .....	—	0	0	—	0	0	—	—	(s)	(s)
Kerosene-Type .....	—	114	61	—	434	-4	—	—	6	607
Kerosene .....	—	13	1	—	4	-4	—	—	(s)	22
Distillate Fuel Oil .....	—	431	218	—	601	-76	—	—	7	1,319
0.05 percent sulfur and under .....	—	215	123	—	378	-19	—	—	(s)	735
Greater than 0.05 percent sulfur ...	—	216	95	—	223	-57	—	—	7	584
Residual Fuel Oil .....	—	107	183	—	44	-16	—	—	6	345
Petrochemical Feedstocks <sup>e</sup> .....	—	13	8	—	3	1	—	—	0	24
Special Naphthas .....	—	2	2	—	4	(s)	—	—	1	6
Lubricants .....	—	17	10	—	29	-1	—	—	4	52
Waxes .....	—	(s)	1	—	(s)	1	—	—	1	(s)
Petroleum Coke .....	—	51	0	—	0	(s)	—	—	5	46
Asphalt and Road Oil .....	—	89	32	—	11	-3	—	—	1	133
Still Gas .....	—	61	0	—	0	0	—	—	0	61
Miscellaneous Products .....	—	2	0	—	0	(s)	—	—	(s)	2
<b>Total .....</b>	<b>111</b>	<b>1,960</b>	<b>2,664</b>	<b>27</b>	<b>2,842</b>	<b>-143</b>	<b>0</b>	<b>1,889</b>	<b>42</b>	<b>5,818</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 6. PAD District II—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>	
<b>Crude Oil</b>	167,294	—	289,632	-884	762,607	-10,769	0	1,215,606	13,811	0	61,624
<b>Natural Gas Liquids and LRGs</b>	105,023	44,938	48,319	—	1,782	-10,154	—	32,749	4,535	172,932	30,968
Pentanes Plus	13,453	—	892	—	7,312	-1,303	—	10,973	1,024	10,963	1,159
Liquefied Petroleum Gases	91,570	44,938	47,427	—	-5,530	-8,851	—	21,776	3,510	161,970	29,809
Ethane/Ethylene	37,556	0	10,538	—	-22,625	-410	—	0	0	25,879	4,434
Propane/Propylene	35,766	41,772	31,318	—	11,056	-8,445	—	0	787	127,570	18,550
Normal Butane/Butylene	11,905	2,743	2,766	—	1,379	125	—	11,471	2,724	4,473	5,210
Isobutane/Isobutylene	6,343	423	2,805	—	4,660	-121	—	10,305	0	4,047	1,615
<b>Other Liquids</b>	-23,836	—	5	—	26,211	-1,652	—	9,354	515	-5,837	23,501
Other Hydrocarbons/Oxygenates	13,669	—	0	—	0	148	—	13,007	514	0	2,268
Unfinished Oils	—	—	5	—	878	-843	—	7,564	0	-5,838	11,082
Motor Gasoline Blend. Comp.	-37,505	—	0	—	25,333	-965	—	-11,208	1	0	10,129
Aviation Gasoline Blend. Comp.	—	—	0	—	0	8	—	-9	0	1	22
<b>Finished Petroleum Products</b>	53,172	1,275,753	4,468	—	316,318	-10,899	—	—	4,454	1,656,156	94,571
Finished Motor Gasoline	53,172	659,243	767	—	171,535	-4,012	—	—	268	888,461	38,351
Reformulated	—	104,713	0	—	21,188	539	—	—	3	125,359	1,448
Oxygenated	156,674	16,926	0	—	-135	80	—	—	0	173,385	499
Other	-103,502	537,604	767	—	150,482	-4,631	—	—	265	589,717	36,404
Finished Aviation Gasoline	—	1,708	17	—	930	-116	—	—	0	2,771	394
Jet Fuel	—	80,255	4	—	49,092	-1,142	—	—	440	130,053	8,460
Naphtha-Type	—	0	4	—	0	0	—	—	1	3	0
Kerosene-Type	—	80,255	0	—	49,092	-1,142	—	—	439	130,050	8,460
Kerosene	—	6,041	1	—	314	19	—	—	3	6,334	1,230
Distillate Fuel Oil	—	303,384	1,609	—	88,333	-1,349	—	—	357	394,318	32,091
0.05 percent sulfur and under	—	220,972	1,333	—	71,927	-846	—	—	84	294,994	22,874
Greater than 0.05 percent sulfur	—	82,412	276	—	16,406	-503	—	—	273	99,324	9,217
Residual Fuel Oil	—	19,677	550	—	-3,742	-675	—	—	281	16,879	1,660
Petrochemical Feedstocks <sup>e</sup>	—	16,510	608	—	682	147	—	—	0	17,653	381
Special Naphthas	—	8,655	341	—	1,874	-79	—	—	130	10,819	362
Lubricants	—	6,853	350	—	4,194	296	—	—	868	10,233	1,881
Waxes	—	1,231	81	—	0	-11	—	—	295	1,028	68
Petroleum Coke	—	51,465	0	—	0	-1,803	—	—	932	52,336	1,953
Asphalt and Road Oil	—	68,827	128	—	3,106	-2,103	—	—	872	73,292	7,536
Still Gas	—	48,071	0	—	0	0	—	—	0	48,071	0
Miscellaneous Products	—	3,833	12	—	0	-71	—	—	8	3,908	204
<b>Total</b>	<b>301,653</b>	<b>1,320,691</b>	<b>342,424</b>	<b>-884</b>	<b>1,106,918</b>	<b>-33,474</b>	<b>0</b>	<b>1,257,709</b>	<b>23,316</b>	<b>1,823,251</b>	<b>210,664</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 7. PAD District II—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>
<b>Crude Oil</b> .....	458	—	794	-2	2,089	-30	0	3,330	38	0
<b>Natural Gas Liquids and LRGs</b> .....	288	123	132	—	5	-28	—	90	12	474
Pentanes Plus .....	37	—	2	—	20	-4	—	30	3	30
Liquefied Petroleum Gases .....	251	123	130	—	-15	-24	—	60	10	444
Ethane/Ethylene .....	103	0	29	—	-62	-1	—	0	0	71
Propane/Propylene .....	98	114	86	—	30	-23	—	0	2	350
Normal Butane/Butylene .....	33	8	8	—	4	(s)	—	31	7	12
Isobutane/Isobutylene .....	17	1	8	—	13	(s)	—	28	0	11
<b>Other Liquids</b> .....	-65	—	(s)	—	72	-5	—	26	1	-16
Other Hydrocarbons/Oxygenates ....	37	—	0	—	0	(s)	—	36	1	0
Unfinished Oils .....	—	—	(s)	—	2	-2	—	21	0	-16
Motor Gasoline Blend. Comp. ....	-103	—	0	—	69	-3	—	-31	(s)	0
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	(s)	—	(s)	0	(s)
<b>Finished Petroleum Products</b> .....	146	3,495	12	—	867	-30	—	—	12	4,537
Finished Motor Gasoline .....	146	1,806	2	—	470	-11	—	—	1	2,434
Reformulated .....	—	287	0	—	58	1	—	—	(s)	343
Oxygenated .....	429	46	0	—	(s)	(s)	—	—	0	475
Other .....	-284	1,473	2	—	412	-13	—	—	1	1,616
Finished Aviation Gasoline .....	—	5	(s)	—	3	(s)	—	—	0	8
Jet Fuel .....	—	220	(s)	—	134	-3	—	—	1	356
Naphtha-Type .....	—	0	(s)	—	0	0	—	—	(s)	(s)
Kerosene-Type .....	—	220	0	—	134	-3	—	—	1	356
Kerosene .....	—	17	(s)	—	1	(s)	—	—	(s)	17
Distillate Fuel Oil .....	—	831	4	—	242	-4	—	—	1	1,080
0.05 percent sulfur and under .....	—	605	4	—	197	-2	—	—	(s)	808
Greater than 0.05 percent sulfur ...	—	226	1	—	45	-1	—	—	1	272
Residual Fuel Oil .....	—	54	2	—	-10	-2	—	—	1	46
Petrochemical Feedstocks <sup>e</sup> .....	—	45	2	—	2	(s)	—	—	0	48
Special Naphthas .....	—	24	1	—	5	(s)	—	—	(s)	30
Lubricants .....	—	19	1	—	11	1	—	—	2	28
Waxes .....	—	3	(s)	—	0	(s)	—	—	1	3
Petroleum Coke .....	—	141	0	—	0	-5	—	—	3	143
Asphalt and Road Oil .....	—	189	(s)	—	9	-6	—	—	2	201
Still Gas .....	—	132	0	—	0	0	—	—	0	132
Miscellaneous Products .....	—	11	(s)	—	0	(s)	—	—	(s)	11
<b>Total</b> .....	826	3,618	938	-2	3,033	-92	0	3,446	64	4,995

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 8. PAD District III—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>	
<b>Crude Oil</b>	<b>1,163,911</b>	<b>—</b>	<b>2,059,802</b>	<b>11,014</b>	<b>-706,332</b>	<b>-30,831</b>	<b>10</b>	<b>2,559,199</b>	<b>16</b>	<b>0</b>	<b>708,652</b>
<b>Natural Gas Liquids and LRGs</b>	<b>469,559</b>	<b>163,844</b>	<b>20,042</b>	<b>—</b>	<b>11,024</b>	<b>-17,740</b>	<b>—</b>	<b>68,316</b>	<b>12,048</b>	<b>601,845</b>	<b>52,011</b>
Pentanes Plus	70,755	—	12,933	—	-2,089	-2,047	—	24,521	(s)	59,125	3,864
Liquefied Petroleum Gases	398,804	163,844	7,109	—	13,113	-15,693	—	43,795	12,048	542,720	48,147
Ethane/Ethylene	184,477	9,836	1,261	—	45,866	-17	—	0	0	241,457	15,965
Propane/Propylene	130,768	127,572	2,943	—	-34,933	-12,488	—	0	9,233	229,605	17,484
Normal Butane/Butylene	31,529	23,497	1,808	—	3,459	-2,211	—	19,642	2,814	40,048	10,898
Isobutane/Isobutylene	52,030	2,939	1,097	—	-1,279	-977	—	24,153	0	31,611	3,800
<b>Other Liquids</b>	<b>65,965</b>	<b>—</b>	<b>84,773</b>	<b>—</b>	<b>-34,924</b>	<b>-988</b>	<b>—</b>	<b>140,640</b>	<b>12,347</b>	<b>-36,185</b>	<b>63,704</b>
Other Hydrocarbons/Oxygenates	52,445	—	0	—	0	458	—	43,640	8,347	0	5,928
Unfinished Oils	—	—	81,266	—	-113	-1,237	—	118,575	0	-36,185	44,341
Motor Gasoline Blend. Comp.	13,520	—	3,507	—	-34,811	-241	—	-21,543	4,000	0	13,381
Aviation Gasoline Blend. Comp.	—	—	0	—	0	32	—	-32	0	0	54
<b>Finished Petroleum Products</b>	<b>-11,870</b>	<b>2,776,734</b>	<b>102,579</b>	<b>—</b>	<b>-1,378,392</b>	<b>-14,588</b>	<b>—</b>	<b>—</b>	<b>165,045</b>	<b>1,338,594</b>	<b>120,939</b>
Finished Motor Gasoline	-11,870	1,291,031	699	—	-791,226	-7,061	—	—	37,104	458,591	43,690
Reformulated	—	249,399	267	—	-142,678	782	—	—	0	106,206	10,059
Oxygenated	16,492	691	0	—	-5,681	46	—	—	1	11,455	47
Other	-28,362	1,040,941	432	—	-642,867	-7,889	—	—	37,103	340,929	33,584
Finished Aviation Gasoline	—	4,780	0	—	-2,176	167	—	—	0	2,437	517
Jet Fuel	—	298,098	2	—	-224,843	-1,489	—	—	6,643	68,103	12,599
Naphtha-Type	—	10	0	—	0	10	—	—	883	-883	11
Kerosene-Type	—	298,088	2	—	-224,843	-1,499	—	—	5,760	68,986	12,588
Kerosene	—	11,261	0	—	-1,581	-452	—	—	112	10,020	1,121
Distillate Fuel Oil	—	564,727	1,940	—	-319,156	-1,618	—	—	32,948	216,181	29,546
0.05 percent sulfur and under	—	374,982	0	—	-220,464	-218	—	—	9,212	145,524	18,396
Greater than 0.05 percent sulfur	—	189,745	1,940	—	-98,692	-1,400	—	—	23,736	70,657	11,150
Residual Fuel Oil	—	115,900	15,735	—	-12,379	-1,422	—	—	29,193	91,485	14,663
Petrochemical Feedstocks <sup>e</sup>	—	122,728	81,940	—	-1,925	-530	—	—	0	203,273	2,625
Special Naphthas	—	21,479	1,197	—	-3,164	246	—	—	408	18,858	1,868
Lubricants	—	45,332	107	—	-14,958	-1,702	—	—	5,979	26,204	5,984
Waxes	—	4,243	175	—	-15	-151	—	—	465	4,089	406
Petroleum Coke	—	129,178	0	—	0	240	—	—	51,972	76,966	3,283
Asphalt and Road Oil	—	45,683	733	—	-6,969	-719	—	—	208	39,958	3,429
Still Gas	—	110,324	0	—	0	0	—	—	0	110,324	0
Miscellaneous Products	—	11,970	51	—	0	-97	—	—	12	12,106	1,208
<b>Total</b>	<b>1,687,564</b>	<b>2,940,578</b>	<b>2,267,196</b>	<b>11,014</b>	<b>-2,108,624</b>	<b>-64,147</b>	<b>10</b>	<b>2,768,155</b>	<b>189,456</b>	<b>1,904,254</b>	<b>945,306</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 9. PAD District III—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>
Crude Oil .....	3,189	—	5,643	30	-1,935	-84	(s)	7,012	(s)	0
Natural Gas Liquids and LRGs .....	1,286	449	55	—	30	-49	—	187	33	1,649
Pentanes Plus .....	194	—	35	—	-6	-6	—	67	(s)	162
Liquefied Petroleum Gases .....	1,093	449	19	—	36	-43	—	120	33	1,487
Ethane/Ethylene .....	505	27	3	—	126	(s)	—	0	0	662
Propane/Propylene .....	358	350	8	—	-96	-34	—	0	25	629
Normal Butane/Butylene .....	86	64	5	—	9	-6	—	54	8	110
Isobutane/Isobutylene .....	143	8	3	—	-4	-3	—	66	0	87
Other Liquids .....	181	—	232	—	-96	-3	—	385	34	-99
Other Hydrocarbons/Oxygenates ....	144	—	0	—	0	1	—	120	23	0
Unfinished Oils .....	—	—	223	—	(s)	-3	—	325	0	-99
Motor Gasoline Blend. Comp. ....	37	—	10	—	-95	-1	—	-59	11	0
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	(s)	—	(s)	0	0
Finished Petroleum Products .....	-33	7,607	281	—	-3,776	-40	—	—	452	3,667
Finished Motor Gasoline .....	-33	3,537	2	—	-2,168	-19	—	—	102	1,256
Reformulated .....	—	683	1	—	-391	2	—	—	0	291
Oxygenated .....	45	2	0	—	-16	(s)	—	—	(s)	31
Other .....	-78	2,852	1	—	-1,761	-22	—	—	102	934
Finished Aviation Gasoline .....	—	13	0	—	-6	(s)	—	—	0	7
Jet Fuel .....	—	817	(s)	—	-616	-4	—	—	18	187
Naphtha-Type .....	—	(s)	0	—	0	(s)	—	—	2	-2
Kerosene-Type .....	—	817	(s)	—	-616	-4	—	—	16	189
Kerosene .....	—	31	0	—	-4	-1	—	—	(s)	27
Distillate Fuel Oil .....	—	1,547	5	—	-874	-4	—	—	90	592
0.05 percent sulfur and under .....	—	1,027	0	—	-604	-1	—	—	25	399
Greater than 0.05 percent sulfur ..	—	520	5	—	-270	-4	—	—	65	194
Residual Fuel Oil .....	—	318	43	—	-34	-4	—	—	80	251
Petrochemical Feedstocks <sup>e</sup> .....	—	336	224	—	-5	-1	—	—	0	557
Special Naphthas .....	—	59	3	—	-9	1	—	—	1	52
Lubricants .....	—	124	(s)	—	-41	-5	—	—	16	72
Waxes .....	—	12	(s)	—	(s)	(s)	—	—	1	11
Petroleum Coke .....	—	354	0	—	0	1	—	—	142	211
Asphalt and Road Oil .....	—	125	2	—	-19	-2	—	—	1	109
Still Gas .....	—	302	0	—	0	0	—	—	0	302
Miscellaneous Products .....	—	33	(s)	—	0	(s)	—	—	(s)	33
<b>Total .....</b>	<b>4,623</b>	<b>8,056</b>	<b>6,211</b>	<b>30</b>	<b>-5,777</b>	<b>-176</b>	<b>(s)</b>	<b>7,584</b>	<b>519</b>	<b>5,217</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 10. PAD District IV—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>	
Crude Oil .....	110,787	—	60,433	44,756	-32,297	1,823	0	181,847	10	0	12,964
Natural Gas Liquids and LRGs .....	61,262	2,296	4,042	—	-51,338	486	—	5,974	23	9,779	1,900
Pentanes Plus .....	10,028	—	1,265	—	-5,223	96	—	2,143	0	3,831	308
Liquefied Petroleum Gases .....	51,234	2,296	2,777	—	-46,115	390	—	3,831	23	5,948	1,592
Ethane/Ethylene .....	21,639	0	0	—	-23,241	247	—	0	0	-1,849	457
Propane/Propylene .....	18,470	3,184	1,895	—	-14,165	73	—	0	11	9,300	561
Normal Butane/Butylene .....	7,159	-334	764	—	-5,216	17	—	2,089	12	255	332
Isobutane/Isobutylene .....	3,966	-554	118	—	-3,493	53	—	1,742	0	-1,758	242
Other Liquids .....	2,202	—	0	—	0	-933	—	3,316	46	-227	4,049
Other Hydrocarbons/Oxygenates .....	960	—	0	—	0	-72	—	986	46	0	191
Unfinished Oils .....	—	—	0	—	0	-740	—	967	0	-227	1,917
Motor Gasoline Blend. Comp. ....	1,242	—	0	—	0	-121	—	1,363	0	0	1,941
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	0	—	0	0	0	0
Finished Petroleum Products .....	-830	195,282	2,778	—	22,332	-486	—	—	182	219,867	10,775
Finished Motor Gasoline .....	-830	95,708	139	—	4,358	132	—	—	10	99,233	4,814
Reformulated .....	—	0	0	—	0	0	—	—	0	0	0
Oxygenated .....	4,123	5,178	0	—	135	81	—	—	9	9,346	234
Other .....	-4,953	90,530	139	—	4,223	51	—	—	2	89,886	4,580
Finished Aviation Gasoline .....	—	156	55	—	143	-11	—	—	0	365	24
Jet Fuel .....	—	9,794	0	—	12,542	-117	—	—	0	22,453	678
Naphtha-Type .....	—	0	0	—	0	0	—	—	0	0	0
Kerosene-Type .....	—	9,794	0	—	12,542	-117	—	—	0	22,453	678
Kerosene .....	—	845	0	—	-103	-11	—	—	0	753	119
Distillate Fuel Oil .....	—	52,446	2,512	—	5,392	209	—	—	0	60,141	3,262
0.05 percent sulfur and under .....	—	43,522	1,241	—	5,441	276	—	—	0	49,928	2,814
Greater than 0.05 percent sulfur ...	—	8,924	1,271	—	-49	-67	—	—	0	10,213	448
Residual Fuel Oil .....	—	4,287	2	—	0	-77	—	—	0	4,366	390
Petrochemical Feedstocks <sup>e</sup> .....	—	255	0	—	0	0	—	—	0	255	0
Special Naphthas .....	—	-2	0	—	0	6	—	—	4	-12	6
Lubricants .....	—	0	0	—	0	0	—	—	103	-103	0
Waxes .....	—	1,361	0	—	0	-26	—	—	50	1,337	22
Petroleum Coke .....	—	6,190	0	—	0	-157	—	—	0	6,347	71
Asphalt and Road Oil .....	—	16,078	70	—	0	-429	—	—	13	16,564	1,374
Still Gas .....	—	7,472	0	—	0	0	—	—	0	7,472	0
Miscellaneous Products .....	—	692	0	—	0	-5	—	—	0	697	15
Total .....	173,421	197,578	67,253	44,756	-61,303	890	0	191,137	260	229,418	29,688

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 11. PAD District IV—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>
Crude Oil .....	304	—	166	123	-88	5	0	498	(s)	0
Natural Gas Liquids and LRGs .....	168	6	11	—	-141	1	—	16	(s)	27
Pentanes Plus .....	27	—	3	—	-14	(s)	—	6	0	10
Liquefied Petroleum Gases .....	140	6	8	—	-126	1	—	10	(s)	16
Ethane/Ethylene .....	59	0	0	—	-64	1	—	0	0	-5
Propane/Propylene .....	51	9	5	—	-39	(s)	—	0	(s)	25
Normal Butane/Butylene .....	20	-1	2	—	-14	(s)	—	6	(s)	1
Isobutane/Isobutylene .....	11	-2	(s)	—	-10	(s)	—	5	0	-5
Other Liquids .....	6	—	0	—	0	-3	—	9	(s)	-1
Other Hydrocarbons/Oxygenates ....	3	—	0	—	0	(s)	—	3	(s)	0
Unfinished Oils .....	—	—	0	—	0	-2	—	3	0	-1
Motor Gasoline Blend. Comp. ....	3	—	0	—	0	(s)	—	4	0	0
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	0	—	0	0	0
Finished Petroleum Products .....	-2	535	8	—	61	-1	—	—	(s)	602
Finished Motor Gasoline .....	-2	262	(s)	—	12	(s)	—	—	(s)	272
Reformulated .....	—	0	0	—	0	0	—	—	0	0
Oxygenated .....	11	14	0	—	(s)	(s)	—	—	(s)	26
Other .....	-14	248	(s)	—	12	(s)	—	—	(s)	246
Finished Aviation Gasoline .....	—	(s)	(s)	—	(s)	(s)	—	—	0	1
Jet Fuel .....	—	27	0	—	34	(s)	—	—	0	62
Naphtha-Type .....	—	0	0	—	0	0	—	—	0	0
Kerosene-Type .....	—	27	0	—	34	(s)	—	—	0	62
Kerosene .....	—	2	0	—	(s)	(s)	—	—	0	2
Distillate Fuel Oil .....	—	144	7	—	15	1	—	—	0	165
0.05 percent sulfur and under .....	—	119	3	—	15	1	—	—	0	137
Greater than 0.05 percent sulfur ...	—	24	3	—	(s)	(s)	—	—	0	28
Residual Fuel Oil .....	—	12	(s)	—	0	(s)	—	—	0	12
Petrochemical Feedstocks <sup>e</sup> .....	—	1	0	—	0	0	—	—	0	1
Special Naphthas .....	—	(s)	0	—	0	(s)	—	—	(s)	(s)
Lubricants .....	—	0	0	—	0	0	—	—	(s)	(s)
Waxes .....	—	4	0	—	0	(s)	—	—	(s)	4
Petroleum Coke .....	—	17	0	—	0	(s)	—	—	0	17
Asphalt and Road Oil .....	—	44	(s)	—	0	-1	—	—	(s)	45
Still Gas .....	—	20	0	—	0	0	—	—	0	20
Miscellaneous Products .....	—	2	0	—	0	(s)	—	—	0	2
<b>Total .....</b>	<b>475</b>	<b>541</b>	<b>184</b>	<b>123</b>	<b>-168</b>	<b>2</b>	<b>0</b>	<b>524</b>	<b>1</b>	<b>629</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 12. PAD District V—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>	
Crude Oil .....	696,692	—	228,636	4,958	-22,461	-1,025	0	881,853	26,997	0	56,446
Natural Gas Liquids and LRGs .....	29,881	23,404	147	—	0	-1,274	—	27,145	1,909	25,652	3,030
Pentanes Plus .....	15,326	—	0	—	0	-28	—	11,337	1	4,016	31
Liquefied Petroleum Gases .....	14,555	23,404	147	—	0	-1,246	—	15,808	1,908	21,636	2,999
Ethane/Ethylene .....	38	0	0	—	0	0	—	0	0	38	0
Propane/Propylene .....	4,300	16,252	147	—	0	-750	—	0	1,545	19,904	1,359
Normal Butane/Butylene .....	4,747	5,394	0	—	0	-459	—	10,909	363	-672	1,306
Isobutane/Isobutylene .....	5,470	1,758	0	—	0	-37	—	4,899	0	2,366	334
Other Liquids .....	24,061	—	36,181	—	5,427	-810	—	62,237	1,015	3,227	30,825
Other Hydrocarbons/Oxygenates .....	27,394	—	21,520	—	0	-884	—	48,794	1,004	0	3,201
Unfinished Oils .....	—	—	11,946	—	0	-576	—	9,295	0	3,227	19,554
Motor Gasoline Blend. Comp. ....	-3,333	—	2,715	—	5,427	670	—	4,128	11	0	8,068
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	-20	—	20	0	0	2
Finished Petroleum Products .....	5,188	1,003,430	46,880	—	42,576	-2,024	—	—	84,794	1,015,304	54,267
Finished Motor Gasoline .....	5,188	478,599	11,780	—	31,424	-711	—	—	2,469	525,234	21,229
Reformulated .....	—	347,131	3,263	—	40	89	—	—	120	350,225	11,885
Oxygenated .....	18,554	16,238	0	—	5,681	42	—	—	390	40,040	46
Other .....	-13,365	115,230	8,517	—	25,703	-842	—	—	1,958	134,969	9,298
Finished Aviation Gasoline .....	—	684	0	—	0	-166	—	—	0	850	505
Jet Fuel .....	—	141,432	24,517	—	4,693	-141	—	—	2,580	168,203	9,147
Naphtha-Type .....	—	187	0	—	0	10	—	—	41	136	43
Kerosene-Type .....	—	141,245	24,517	—	4,693	-151	—	—	2,539	168,067	9,104
Kerosene .....	—	1,435	0	—	0	-21	—	—	57	1,399	105
Distillate Fuel Oil .....	—	162,808	5,877	—	6,106	49	—	—	23,168	151,574	12,100
0.05 percent sulfur and under .....	—	124,125	3,922	—	5,078	426	—	—	4,053	128,646	9,163
Greater than 0.05 percent sulfur ...	—	38,683	1,955	—	1,028	-377	—	—	19,115	22,928	2,937
Residual Fuel Oil .....	—	75,889	3,230	—	0	-909	—	—	15,584	64,444	5,051
Petrochemical Feedstocks <sup>e</sup> .....	—	4,240	873	—	0	-22	—	—	0	5,135	335
Special Naphthas .....	—	596	0	—	0	-11	—	—	4,910	-4,303	34
Lubricants .....	—	8,495	0	—	353	472	—	—	1,715	6,661	1,889
Waxes .....	—	248	256	—	0	-13	—	—	197	320	235
Petroleum Coke .....	—	54,778	347	—	0	-261	—	—	33,729	21,657	1,551
Asphalt and Road Oil .....	—	21,098	0	—	0	-311	—	—	367	21,042	1,878
Still Gas .....	—	51,260	0	—	0	0	—	—	0	51,260	0
Miscellaneous Products .....	—	1,868	0	—	0	21	—	—	17	1,830	208
Total .....	755,822	1,026,834	311,844	4,958	25,542	-5,133	0	971,235	114,715	1,044,183	144,568

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."



**Table 13. PAD District V — Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1999**  
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry <sup>a</sup>	Unaccounted For Crude Oil <sup>b</sup>	Net Receipts	Stock Change <sup>c</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>d</sup>
<b>Crude Oil</b> .....	<b>1,909</b>	<b>—</b>	<b>626</b>	<b>14</b>	<b>-62</b>	<b>-3</b>	<b>0</b>	<b>2,416</b>	<b>74</b>	<b>0</b>
<b>Natural Gas Liquids and LRGs</b> .....	<b>82</b>	<b>64</b>	<b>(s)</b>	<b>—</b>	<b>0</b>	<b>-3</b>	<b>—</b>	<b>74</b>	<b>5</b>	<b>70</b>
Pentanes Plus .....	42	—	0	—	0	(s)	—	31	(s)	11
Liquefied Petroleum Gases .....	40	64	(s)	—	0	-3	—	43	5	59
Ethane/Ethylene .....	(s)	0	0	—	0	0	—	0	0	(s)
Propane/Propylene .....	12	45	(s)	—	0	-2	—	0	4	55
Normal Butane/Butylene .....	13	15	0	—	0	-1	—	30	1	-2
Isobutane/Isobutylene .....	15	5	0	—	0	(s)	—	13	0	6
<b>Other Liquids</b> .....	<b>66</b>	<b>—</b>	<b>99</b>	<b>—</b>	<b>15</b>	<b>-2</b>	<b>—</b>	<b>171</b>	<b>3</b>	<b>9</b>
Other Hydrocarbons/Oxygenates .....	75	—	59	—	0	-2	—	134	3	0
Unfinished Oils .....	—	—	33	—	0	-2	—	25	0	9
Motor Gasoline Blend. Comp. ....	-9	—	7	—	15	2	—	11	(s)	0
Aviation Gasoline Blend. Comp. ....	—	—	0	—	0	(s)	—	(s)	0	0
<b>Finished Petroleum Products</b> .....	<b>14</b>	<b>2,749</b>	<b>128</b>	<b>—</b>	<b>117</b>	<b>-6</b>	<b>—</b>	<b>—</b>	<b>232</b>	<b>2,782</b>
Finished Motor Gasoline .....	14	1,311	32	—	86	-2	—	—	7	1,439
Reformulated .....	—	951	9	—	(s)	(s)	—	—	(s)	960
Oxygenated .....	51	44	0	—	16	(s)	—	—	1	110
Other .....	-37	316	23	—	70	-2	—	—	5	370
Finished Aviation Gasoline .....	—	2	0	—	0	(s)	—	—	0	2
Jet Fuel .....	—	387	67	—	13	(s)	—	—	7	461
Naphtha-Type .....	—	1	0	—	0	(s)	—	—	(s)	(s)
Kerosene-Type .....	—	387	67	—	13	(s)	—	—	7	460
Kerosene .....	—	4	0	—	0	(s)	—	—	(s)	4
Distillate Fuel Oil .....	—	446	16	—	17	(s)	—	—	63	415
0.05 percent sulfur and under .....	—	340	11	—	14	1	—	—	11	352
Greater than 0.05 percent sulfur ...	—	106	5	—	3	-1	—	—	52	63
Residual Fuel Oil .....	—	208	9	—	0	-2	—	—	43	177
Petrochemical Feedstocks <sup>e</sup> .....	—	12	2	—	0	(s)	—	—	0	14
Special Naphthas .....	—	2	0	—	0	(s)	—	—	13	-12
Lubricants .....	—	23	0	—	1	1	—	—	5	18
Waxes .....	—	1	1	—	0	(s)	—	—	1	1
Petroleum Coke .....	—	150	1	—	0	-1	—	—	92	59
Asphalt and Road Oil .....	—	58	0	—	0	-1	—	—	1	58
Still Gas .....	—	140	0	—	0	0	—	—	0	140
Miscellaneous Products .....	—	5	0	—	0	(s)	—	—	(s)	5
<b>Total</b> .....	<b>2,071</b>	<b>2,813</b>	<b>854</b>	<b>14</b>	<b>70</b>	<b>-14</b>	<b>0</b>	<b>2,661</b>	<b>314</b>	<b>2,861</b>

<sup>a</sup> Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

<sup>b</sup> Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

<sup>d</sup> Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

<sup>e</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

LRG = Liquefied Refinery Gas.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". Domestic crude oil production from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 14. Production of Crude Oil by PAD District and State, 1999**  
(Thousand Barrels)

PAD District and State	Total	Daily Average
<b>PAD District I</b> .....	<b>8,048</b>	<b>22</b>
Florida .....	4,895	13
New York .....	205	1
Pennsylvania .....	1,470	4
Virginia .....	8	(s)
West Virginia .....	1,470	4
<b>PAD District II</b> .....	<b>167,294</b>	<b>458</b>
Illinois .....	12,065	33
Indiana .....	1,964	5
Kansas .....	29,046	80
Kentucky .....	2,777	8
Michigan .....	7,835	21
Missouri .....	92	(s)
Nebraska .....	2,661	7
North Dakota .....	32,883	90
Ohio .....	5,968	16
Oklahoma .....	70,557	193
South Dakota .....	1,100	3
Tennessee .....	345	1
<b>PAD District III</b> .....	<b>1,163,911</b>	<b>3,189</b>
Alabama .....	11,125	30
Arkansas .....	7,154	20
Louisiana <sup>a</sup> .....	120,008	329
Mississippi .....	17,949	49
New Mexico .....	64,377	176
Texas <sup>a</sup> .....	449,233	1,231
Federal Offshore PAD District III .....	494,066	1,354
<b>PAD District IV</b> .....	<b>110,787</b>	<b>304</b>
Colorado .....	18,468	51
Montana .....	14,939	41
Utah .....	16,253	45
Wyoming .....	61,127	167
<b>PAD District V</b> .....	<b>696,692</b>	<b>1,909</b>
Alaska <sup>a</sup> .....	383,198	1,050
South Alaska .....	10,917	30
North Slope .....	372,281	1,020
Arizona .....	66	(s)
California <sup>a</sup> .....	273,019	748
Nevada .....	706	2
Federal Offshore PAD District V .....	39,703	109
<b>U.S. Total<sup>a</sup></b> .....	<b>2,146,732</b>	<b>5,881</b>

<sup>a</sup> Includes the following offshore production (thousand barrels): Alaska: State - 69,788; California: State - 18,803; Louisiana: State - 15,887; Texas: State - 475; U.S. Total, including Federal offshore - 638,721.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: • A final revision to the State data for 1999 will appear in the 2000 Petroleum Supply Annual. • Totals may not equal sum of components due to independent rounding.

Sources: State government agencies, U.S. Department of the Interior, Minerals Management Service, and EIA Reserves and Production Division estimates based on Form EIA-182, "Domestic Crude Oil First Purchase Report" data.

Revised 1998 crude oil production statistics are available in Appendix C.

**Table 15. Natural Gas Plant Net Production and Stocks of Petroleum Products by PAD and Refining Districts, 1999**  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
<b>Net Production</b>							
Natural Gas Liquids .....	1,602	7,793	9,395	5,710	4,214	95,099	105,023
Pentanes Plus .....	169	899	1,068	1,033	988	11,432	13,453
Liquefied Petroleum Gases .....	1,433	6,894	8,327	4,677	3,226	83,667	91,570
Ethane .....	569	2,266	2,835	1,469	0	36,087	37,556
Propane .....	525	3,164	3,689	1,857	2,038	31,871	35,766
Normal Butane .....	339	995	1,334	770	1,188	9,947	11,905
Isobutane .....	0	469	469	581	0	5,762	6,343
<b>Stocks</b>							
Natural Gas Liquids .....	6	37	43	90	48	1,211	1,349
Pentanes Plus .....	0	9	9	12	12	74	98
Liquefied Petroleum Gases .....	6	28	34	78	36	1,137	1,251
Ethane .....	0	0	0	17	0	307	324
Propane .....	2	22	24	34	23	653	710
Normal Butane .....	4	3	7	12	13	100	125
Isobutane .....	0	3	3	15	0	77	92

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Net Production									
Natural Gas Liquids .....	215,698	54,488	120,124	5,769	73,480	469,559	61,262	29,881	675,120
Pentanes Plus .....	34,712	6,862	19,035	1,893	8,253	70,755	10,028	15,326	110,630
Liquefied Petroleum Gases .....	180,986	47,626	101,089	3,876	65,227	398,804	51,234	14,555	564,490
Ethane .....	83,722	22,018	44,001	747	33,989	184,477	21,639	38	246,545
Propane .....	61,185	12,946	34,707	1,540	20,390	130,768	18,470	4,300	192,993
Normal Butane .....	24,685	-13,023	11,693	1,009	7,165	31,529	7,159	4,747	56,674
Isobutane .....	11,394	25,685	10,688	580	3,683	52,030	3,966	5,470	68,278
Stocks									
Natural Gas Liquids .....	134	711	1,769	99	43	2,756	304	195	4,647
Pentanes Plus .....	44	137	263	39	5	488	143	19	757
Liquefied Petroleum Gases .....	90	574	1,506	60	38	2,268	161	176	3,890
Ethane .....	8	253	337	30	0	628	2	0	954
Propane .....	51	151	524	11	24	761	81	133	1,709
Normal Butane .....	21	90	340	7	6	464	62	15	673
Isobutane .....	10	80	305	12	8	415	16	28	554

Note: • Stocks are reported as of the end of December. • Refer to Appendix A for Refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-816, "Monthly Natural Gas Liquids Report."



**Table 16. Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts, 1999**  
(Thousand Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
<b>Crude Oil</b> .....	531,318	33,627	564,945	814,685	143,159	257,762	1,215,606
<b>Natural Gas Liquids</b> .....	1,572	0	1,572	16,561	2,515	13,673	32,749
Pentanes Plus .....	0	0	0	1,466	1,430	8,077	10,973
Liquefied Petroleum Gases .....	1,572	0	1,572	15,095	1,085	5,596	21,776
Ethane .....	0	0	0	0	0	0	0
Propane .....	0	0	0	0	0	0	0
Normal Butane .....	745	0	745	8,041	486	2,944	11,471
Isobutane .....	827	0	827	7,054	599	2,652	10,305
<b>Other Liquids</b> .....	123,374	-476	122,898	1,749	12,112	-4,507	9,354
Other Hydrocarbons/Hydrogen/Oxygenates .....	27,680	6	27,686	8,851	2,949	1,207	13,007
Other Hydrocarbons/Hydrogen .....	0	0	0	382	0	345	727
Oxygenates .....	W	W	27,686	8,469	2,949	862	12,280
Fuel Ethanol .....	W	W	W	W	W	W	11,127
Methanol .....	W	W	W	W	W	W	W
MTBE .....	W	W	26,228	W	W	W	W
Other Oxygenates <sup>a</sup> .....	W	W	W	W	W	W	W
Unfinished Oils (net) .....	33,761	-382	33,379	15,594	-164	-7,866	7,564
Motor Gasoline Blend. Comp. (net) .....	63,169	-100	63,069	-22,687	9,327	2,152	-11,208
Aviation Gasoline Blend. Comp. (net) .....	-1,236	0	-1,236	-9	0	0	-9
<b>Total Input to Refineries</b> .....	656,264	33,151	689,415	832,995	157,786	266,928	1,257,709
<b>Atmospheric Crude Oil Distillation</b>							
Gross Input (daily average) .....	1,445	92	1,537	2,272	392	710	3,373
Operable Capacity (daily average) .....	1,591	100	1,691	2,469	421	727	3,616
Operable Utilization Rate (percent) <sup>b</sup> .....	90.8	92.5	90.9	92.0	93.0	97.7	93.3
<b>Downstream Processing</b>							
<b>Fresh Feed Input (daily average)</b>							
Catalytic Cracking .....	626	20	646	790	123	202	1,115
Catalytic Hydrocracking .....	38	0	38	137	0	4	141
Delayed and Fluid Coking .....	81	0	81	190	52	78	320
<b>Crude Oil Qualities</b>							
Sulfur Content, Weighted Average (percent) .....	0.95	1.18	0.96	1.23	2.15	0.75	1.24
API Gravity, Weighted Average (degrees) .....	33.35	33.89	33.38	33.28	29.71	35.68	33.37
<b>Operable Capacity (daily average)</b> .....	1,591	100	1,691	2,469	421	727	3,616
Operating .....	1,498	100	1,598	2,464	421	727	3,612
Idle .....	93	0	93	4	0	0	4
<b>Alaskan Crude Oil Receipts</b> .....	0	0	0	0	0	0	0

See footnotes at end of table.

**Table 16. Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts, 1999 (Continued)**  
(Thousand Barrels, Except Where Noted)

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Crude Oil .....	203,260	1,234,956	1,019,396	68,616	32,971	2,559,199	181,847	881,853	5,403,450
Natural Gas Liquids .....	11,809	33,484	17,692	2,270	3,061	68,316	5,974	27,145	135,756
Pentanes Plus .....	6,433	13,931	815	1,714	1,628	24,521	2,143	11,337	48,974
Liquefied Petroleum Gases .....	5,376	19,553	16,877	556	1,433	43,795	3,831	15,808	86,782
Ethane .....	0	0	0	0	0	0	0	0	0
Propane .....	0	0	0	0	0	0	0	0	0
Normal Butane .....	4,964	6,766	7,786	53	73	19,642	2,089	10,909	44,856
Isobutane .....	412	12,787	9,091	503	1,360	24,153	1,742	4,899	41,926
Other Liquids .....	-6	121,782	21,639	-1,202	-1,573	140,640	3,316	62,237	338,445
Other Hydrocarbons/Hydrogen/Oxygenates .....	1,569	30,113	11,680	2	276	43,640	986	48,794	134,113
Other Hydrocarbons/Hydrogen .....	1,416	4,796	5,519	0	0	11,731	42	8,947	21,447
Oxygenates .....	153	25,317	6,161	W	W	31,909	944	39,847	112,666
Fuel Ethanol .....	W	W	W	W	W	W	W	W	13,735
Methanol .....	W	W	W	W	W	W	W	W	813
MTBE .....	W	23,856	W	W	W	29,667	W	37,853	94,784
Other Oxygenates <sup>a</sup> .....	W	W	W	W	W	W	W	W	3,334
Unfinished Oils (net) .....	1,923	112,378	4,438	-972	808	118,575	967	9,295	169,780
Motor Gasoline Blend. Comp. (net) .....	-3,496	-20,688	5,530	-232	-2,657	-21,543	1,363	4,128	35,809
Aviation Gasoline Blend. Comp. (net) .....	-2	-21	-9	0	0	-32	0	20	-1,257
Total Input to Refineries .....	215,063	1,390,222	1,058,727	69,684	34,459	2,768,155	191,137	971,235	5,877,651
Atmospheric Crude Oil Distillation									
Gross Input (daily average) .....	560	3,364	2,831	179	90	7,025	505	2,640	15,080
Operable Capacity (daily average) .....	574	3,610	2,934	202	95	7,414	528	3,032	16,282
Operable Utilization Rate (percent) <sup>b</sup> .....	97.5	93.2	96.5	88.9	95.6	94.7	95.7	87.1	92.6
Downstream Processing									
Fresh Feed Input (daily average)									
Catalytic Cracking .....	180	1,376	937	28	27	2,547	145	685	5,137
Catalytic Hydrocracking .....	39	247	214	0	0	500	5	413	1,097
Delayed and Fluid Coking .....	5	410	433	9	0	857	39	461	1,758
Crude Oil Qualities									
Sulfur Content, Weighted Average (percent) .....	0.80	1.53	1.56	1.74	0.51	1.48	1.37	1.24	1.33
API Gravity, Weighted Average (degrees) .....	38.15	31.00	30.17	30.72	39.02	31.33	34.10	26.67	31.31
Operable Capacity (daily average) .....	574	3,610	2,934	202	95	7,414	528	3,032	16,282
Operating .....	572	3,583	2,923	198	95	7,370	528	2,997	16,105
Idle .....	2	27	11	4	0	44	0	36	177
Alaskan Crude Oil Receipts .....	0	0	0	0	101	101	0	390,719	390,820

<sup>a</sup> Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

<sup>b</sup> Represents gross input divided by operable capacity.

W = Withheld to avoid disclosure of individual company data.

Note: \* Totals may not equal sum of components due to independent rounding. \* Refer to Appendix A for Refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."

**Table 17. Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts, 1999**  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Liquefied Refinery Gases .....	14,717	375	15,092	36,181	2,217	6,540	44,938
Ethane/Ethylene .....	0	0	0	0	0	0	0
Ethane .....	W	W	W	W	W	W	W
Ethylene .....	W	W	W	W	W	W	W
Propane/Propylene .....	18,413	386	18,799	31,297	3,402	7,073	41,772
Propane .....	W	W	W	24,967	W	W	W
Propylene .....	W	W	W	6,330	W	W	W
Normal Butane/Butylene .....	-2,116	32	-2,084	4,026	-1,131	-152	2,743
Normal Butane .....	W	W	W	W	W	W	W
Butylene .....	W	W	W	W	W	W	W
Isobutane/Isobutylene .....	-1,580	-43	-1,623	858	-54	-381	423
Isobutane .....	W	W	W	W	W	W	W
Isobutylene .....	W	W	W	W	W	W	W
Finished Motor Gasoline .....	358,723	12,685	371,408	432,463	87,183	139,597	659,243
Reformulated .....	234,759	0	234,759	84,757	17,308	2,648	104,713
Oxygenated .....	357	-1	356	0	16,628	298	16,926
Other .....	123,607	12,686	136,293	347,706	53,247	136,651	537,604
Finished Aviation Gasoline .....	124	0	124	592	452	664	1,708
Jet Fuel .....	41,034	658	41,692	55,522	11,668	13,065	80,255
Naphtha-Type .....	0	0	0	0	0	0	0
Kerosene-Type .....	41,034	658	41,692	55,522	11,668	13,065	80,255
Commercial .....	41,034	460	41,494	54,025	11,048	11,557	76,630
Military .....	0	198	198	1,497	620	1,508	3,625
Kerosene .....	4,046	725	4,771	4,985	365	691	6,041
Distillate Fuel Oil .....	149,012	8,406	157,418	188,218	34,836	80,330	303,384
0.05 percent sulfur and under .....	71,281	7,116	78,397	136,868	22,505	61,599	220,972
Greater than 0.05 percent sulfur .....	77,731	1,290	79,021	51,350	12,331	18,731	82,412
Residual Fuel Oil .....	38,556	530	39,086	15,402	2,940	1,335	19,677
Less than 0.31 percent sulfur .....	15,188	316	15,504	55	0	0	55
0.31 to 1.00 percent sulfur .....	26,031	214	26,245	4,144	0	59	4,203
Greater than 1.00 percent sulfur .....	-2,663	0	-2,663	11,203	2,940	1,276	15,419
Naphtha for Petrochemical Feedstock Use .....	4,804	0	4,804	7,872	0	0	7,872
Other Oils for Petrochemical Feedstock Use .....	0	0	0	8,039	0	599	8,638
Special Naphthas .....	384	284	668	7,722	0	933	8,655
Lubricants .....	3,687	2,417	6,104	3,951	0	2,902	6,853
Naphthenic .....	0	0	0	0	0	0	0
Paraffinic .....	3,687	2,417	6,104	3,951	0	2,902	6,853
Waxes .....	0	-8	-8	714	0	517	1,231
Petroleum Coke .....	18,172	332	18,504	32,663	9,001	9,801	51,465
Marketable .....	6,974	0	6,974	20,091	5,564	7,316	32,971
Catalyst .....	11,198	332	11,530	12,572	3,437	2,485	18,494
Asphalt and Road Oil .....	26,825	5,769	32,594	47,249	13,392	8,186	68,827
Still Gas .....	21,458	935	22,393	32,039	5,301	10,731	48,071
Miscellaneous Products .....	383	427	810	2,534	805	494	3,833
Fuel Use .....	0	0	0	0	0	0	0
Nonfuel Use .....	383	427	810	2,534	805	494	3,833
<b>Total .....</b>	<b>681,925</b>	<b>33,535</b>	<b>715,460</b>	<b>876,146</b>	<b>168,160</b>	<b>276,385</b>	<b>1,320,691</b>
Processing Gain(-) or Loss(+) <sup>a</sup> .....	-25,661	-384	-26,045	-43,151	-10,374	-9,457	-62,982

See footnotes at end of table.



**Table 17. Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts, 1999 (Continued)**  
(Thousand Barrels)

Commodity	PAD District III						PAD Dist.	PAD Dist.	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	IV	V	
							Rocky Mt.	West Coast	
Liquefied Refinery Gases .....	9,523	99,079	53,696	661	885	163,844	2,296	23,404	249,574
Ethane/Ethylene .....	185	8,431	1,220	0	0	9,836	0	0	9,836
Ethane .....	W	W	W	W	W	W	W	W	7,742
Ethylene .....	W	W	W	W	W	W	W	W	2,094
Propane/Propylene .....	8,121	70,734	46,919	1,108	690	127,572	3,184	16,252	207,579
Propane .....	W	32,023	30,771	W	W	69,480	W	W	134,124
Propylene .....	W	38,711	16,148	W	W	58,092	W	W	73,455
Normal Butane/Butylene .....	2,306	16,921	4,372	-297	195	23,497	-334	5,394	29,216
Normal Butane .....	W	W	W	W	W	W	W	W	29,236
Butylene .....	W	W	W	W	W	W	W	W	-20
Isobutane/Isobutylene .....	-1,089	2,993	1,185	-150	0	2,939	-554	1,758	2,943
Isobutane .....	W	W	W	W	W	W	W	W	1,908
Isobutylene .....	W	W	W	W	W	W	W	W	1,035
Finished Motor Gasoline .....	115,980	651,235	484,810	19,846	19,160	1,291,031	95,708	478,599	2,895,989
Reformulated .....	6,704	198,348	44,347	0	0	249,399	0	347,131	936,002
Oxygenated .....	0	0	235	0	456	691	5,178	16,238	39,389
Other .....	109,276	452,887	440,228	19,846	18,704	1,040,941	90,530	115,230	1,920,598
Finished Aviation Gasoline .....	1,498	2,097	1,185	0	0	4,780	156	684	7,452
Jet Fuel .....	18,532	135,083	139,033	2,987	2,463	298,098	9,794	141,432	571,271
Naphtha-Type .....	10	0	0	0	0	10	0	187	197
Kerosene-Type .....	18,522	135,083	139,033	2,987	2,463	298,088	9,794	141,245	571,074
Commercial .....	14,250	113,272	134,066	2,393	0	263,981	7,959	128,922	518,986
Military .....	4,272	21,811	4,967	594	2,463	34,107	1,835	12,323	52,088
Kerosene .....	26	9,331	1,173	719	12	11,261	845	1,435	24,353
Distillate Fuel Oil .....	50,686	262,348	226,452	16,393	8,848	564,727	52,446	162,808	1,240,783
0.05 percent sulfur and under .....	39,590	204,222	114,395	8,175	8,600	374,982	43,522	124,125	841,998
Greater than 0.05 percent sulfur .....	11,096	58,126	112,057	8,218	248	189,745	8,924	38,683	398,785
Residual Fuel Oil .....	3,008	69,114	41,152	2,439	187	115,900	4,287	75,889	254,839
Less than 0.31 percent sulfur .....	1,636	25	4,660	0	0	6,321	864	1,806	24,550
0.31 to 1.00 percent sulfur .....	515	7,807	7,537	2,122	187	18,168	1,039	16,270	65,925
Greater than 1.00 percent sulfur .....	857	61,282	28,955	317	0	91,411	2,384	57,813	164,364
Naphtha for Petrochemical Feedstock Use .....	1,360	43,270	10,614	0	-18	55,226	0	1,816	69,718
Other Oils for Petrochemical Feedstock Use .....	1,554	36,509	29,439	0	0	67,502	255	2,424	78,819
Special Naphthas .....	1,079	16,854	1,618	1,928	0	21,479	-2	596	31,396
Lubricants .....	W	20,550	W	W	W	45,332	0	8,495	66,784
Naphthenic .....	W	2,505	W	W	W	9,853	0	3,775	13,628
Paraffinic .....	W	18,045	W	W	W	35,479	0	4,720	53,156
Waxes .....	0	2,309	1,410	524	0	4,243	1,361	248	7,075
Petroleum Coke .....	3,326	68,114	56,487	798	453	129,178	6,190	54,778	260,115
Marketable .....	317	43,516	43,219	561	0	87,613	3,562	42,241	173,361
Catalyst .....	3,009	24,598	13,268	237	453	41,565	2,628	12,537	86,754
Asphalt and Road Oil .....	6,347	11,494	12,931	13,210	1,701	45,683	16,078	21,098	184,280
Still Gas .....	8,578	56,104	42,607	2,054	981	110,324	7,472	51,260	239,520
Miscellaneous Products .....	515	5,457	5,998	0	0	11,970	692	1,868	19,173
Fuel Use .....	0	0	2,154	0	0	2,154	0	-321	1,833
Nonfuel Use .....	515	5,457	3,844	0	0	9,816	692	2,189	17,340
<b>Total .....</b>	<b>222,584</b>	<b>1,488,948</b>	<b>1,124,210</b>	<b>70,164</b>	<b>34,672</b>	<b>2,940,578</b>	<b>197,578</b>	<b>1,026,834</b>	<b>6,201,141</b>
Processing Gain(-) or Loss(+) <sup>a</sup> .....	-7,521	-98,726	-65,483	-480	-213	-172,423	-6,441	-55,599	-323,490

<sup>a</sup> Represents the arithmetic difference between input and production.

W = Withheld to avoid disclosure of individual company data.

Note: Refer to Appendix A for refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."

**Table 18. Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts, 1999**  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
<b>Crude Oil</b>	<b>10,924</b>	<b>416</b>	<b>11,340</b>	<b>10,330</b>	<b>1,979</b>	<b>2,855</b>	<b>15,164</b>
<b>Petroleum Products</b>	<b>45,079</b>	<b>2,296</b>	<b>47,375</b>	<b>33,675</b>	<b>6,915</b>	<b>9,994</b>	<b>50,584</b>
Pentanes Plus	0	0	0	48	47	147	242
Liquefied Petroleum Gases	1,802	18	1,820	2,195	279	764	3,238
Ethane/Ethylene	0	0	0	2	0	0	2
Propane/Propylene	632	12	644	1,150	27	318	1,495
Normal Butane/Butylene	983	2	985	824	199	221	1,244
Isobutane/Isobutylene	187	4	191	219	53	225	497
Other Hydrocarbons/Hydrogen/Oxygenates	1,672	6	1,678	280	191	10	481
Other Hydrocarbons/Hydrogen	0	0	0	26	0	0	26
Oxygenates	W	W	1,678	254	191	10	455
Fuel Ethanol	W	W	W	W	W	W	391
Methanol	W	W	W	W	W	W	W
MTBE	W	W	1,349	W	W	W	W
Other Oxygenates <sup>a</sup>	W	W	W	W	W	W	W
Unfinished Oils	8,639	721	9,360	7,688	547	2,847	11,082
Naphthas and Lighter	1,643	207	1,850	2,129	149	929	3,207
Kerosene and Light Gas Oils	2,091	2	2,093	1,393	83	412	1,888
Heavy Gas Oils	3,573	423	3,996	2,397	303	648	3,348
Residuum	1,332	89	1,421	1,769	12	858	2,639
Motor Gasoline Blending Components	5,433	20	5,453	5,836	965	1,129	7,930
Aviation Gasoline Blending Components	143	0	143	22	0	0	22
Finished Motor Gasoline	8,052	221	8,273	4,565	1,025	1,655	7,245
Reformulated	5,002	0	5,002	108	5	0	113
Oxygenated	0	14	14	0	200	0	200
Other	3,050	207	3,257	4,457	820	1,655	6,932
Finished Aviation Gasoline	46	0	46	18	55	61	134
Jet Fuel	1,475	23	1,498	2,244	142	462	2,848
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	1,475	23	1,498	2,244	142	462	2,848
Kerosene	188	57	245	237	60	37	334
Distillate Fuel Oil	10,841	224	11,065	5,113	1,522	1,620	8,255
0.05 percent sulfur and under	2,428	205	2,633	3,193	688	1,120	5,001
Greater than 0.05 percent sulfur	8,413	19	8,432	1,920	834	500	3,254
Residual Fuel Oil	4,603	28	4,631	978	162	154	1,294
Less than 0.31 percent sulfur	931	20	951	0	0	0	0
0.31 to 1.00 percent sulfur	2,086	8	2,094	153	0	0	153
Greater than 1.00 percent sulfur	1,586	0	1,586	825	162	154	1,141
Naphtha for Petrochemical Feedstock Use	610	0	610	309	0	0	309
Other Oils for Petrochemical Feedstock Use	0	0	0	72	0	0	72
Special Naphthas	47	16	63	317	0	38	355
Lubricants	347	293	640	465	0	0	465
Waxes	0	246	246	19	0	49	68
Petroleum Coke (Marketable)	266	0	266	954	846	153	1,953
Asphalt and Road Oil	911	381	1,292	2,249	1,060	868	4,177
Miscellaneous Products	4	42	46	66	14	0	80
<b>Total Stocks, All Oils</b>	<b>56,003</b>	<b>2,712</b>	<b>58,715</b>	<b>44,005</b>	<b>8,894</b>	<b>12,849</b>	<b>65,748</b>

See footnotes at end of table.



**Table 18. Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts, 1999 (Continued)**  
(Thousand Barrels)

Commodity	PAD District III						PAD Dist.	PAD Dist.	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	IV	V	
							Rocky Mt.	West Coast	
Crude Oil .....	978	24,779	17,998	1,050	263	45,068	2,316	19,136	93,024
Petroleum Products .....	9,575	62,428	49,691	4,038	1,286	127,018	10,349	57,875	293,201
Pentanes Plus .....	49	96	7	17	13	182	21	0	445
Liquefied Petroleum Gases .....	1,527	2,819	3,267	27	56	7,696	354	1,135	14,243
Ethane/Ethylene .....	116	534	0	0	0	650	0	0	652
Propane/Propylene .....	795	913	379	6	3	2,096	101	100	4,436
Normal Butane/Butylene .....	372	890	2,523	10	18	3,813	114	761	6,917
Isobutane/Isobutylene .....	244	482	365	11	35	1,137	139	274	2,238
Other Hydrocarbons/Hydrogen/Oxygenates .....	54	1,729	550	15	13	2,361	71	1,977	6,568
Other Hydrocarbons/Hydrogen .....	0	0	1	0	0	1	0	3	30
Oxygenates .....	54	1,729	549	W	W	2,360	71	1,974	6,538
Fuel Ethanol .....	W	W	W	W	W	W	W	W	578
Methanol .....	W	W	W	W	W	W	W	W	905
MTBE .....	W	1,138	W	W	W	1,655	W	1,909	4,940
Other Oxygenates <sup>a</sup> .....	W	W	W	W	W	W	W	W	115
Unfinished Oils .....	2,849	20,848	19,248	957	439	44,341	1,917	19,554	86,254
Naphthas and Lighter .....	979	5,184	4,198	255	191	10,807	510	3,295	19,669
Kerosene and Light Gas Oils .....	407	3,955	3,389	212	82	8,045	265	4,807	17,098
Heavy Gas Oils .....	868	7,627	8,438	453	166	17,552	819	8,749	34,464
Residuum .....	595	4,082	3,223	37	0	7,937	323	2,703	15,023
Motor Gasoline Blending Components .....	1,197	6,023	4,259	96	283	11,858	1,941	6,778	33,960
Aviation Gasoline Blending Components .....	8	21	25	0	0	54	0	2	221
Finished Motor Gasoline .....	1,382	9,195	6,128	308	116	17,129	2,438	9,362	44,447
Reformulated .....	92	3,907	246	0	0	4,245	0	5,036	14,396
Oxygenated .....	0	0	0	0	0	0	81	46	341
Other .....	1,290	5,288	5,882	308	116	12,884	2,357	4,280	29,710
Finished Aviation Gasoline .....	50	305	119	0	0	474	20	338	1,012
Jet Fuel .....	449	2,890	2,268	87	27	5,721	301	4,741	15,109
Naphtha-Type .....	2	0	0	0	0	2	0	39	41
Kerosene-Type .....	447	2,890	2,268	87	27	5,719	301	4,702	15,068
Kerosene .....	26	240	169	33	10	478	69	74	1,200
Distillate Fuel Oil .....	1,049	7,627	5,184	453	157	14,470	1,495	5,587	40,872
0.05 percent sulfur and under .....	805	5,230	2,353	218	110	8,716	1,174	4,016	21,540
Greater than 0.05 percent sulfur .....	244	2,397	2,831	235	47	5,754	321	1,571	19,332
Residual Fuel Oil .....	181	3,546	2,130	173	11	6,041	390	3,287	15,643
Less than 0.31 percent sulfur .....	37	7	10	0	0	54	17	632	1,654
0.31 to 1.00 percent sulfur .....	0	184	227	114	11	536	172	993	3,948
Greater than 1.00 percent sulfur .....	144	3,355	1,893	59	0	5,451	201	1,662	10,041
Naphtha for Petrochemical Feedstock Use .....	14	769	379	0	16	1,178	0	167	2,264
Other Oils for Petrochemical Feedstock Use .....	87	1,087	273	0	0	1,447	0	168	1,687
Special Naphthas .....	63	1,444	34	123	0	1,664	6	34	2,122
Lubricants .....	26	1,957	1,917	802	0	4,702	0	1,197	7,004
Waxes .....	0	197	186	23	0	406	22	235	977
Petroleum Coke (Marketable) .....	0	845	2,438	0	0	3,283	71	1,551	7,124
Asphalt and Road Oil .....	552	557	665	924	145	2,843	1,233	1,522	11,067
Miscellaneous Products .....	12	233	445	0	0	690	0	166	982
<b>Total Stocks, All Oils .....</b>	<b>10,553</b>	<b>87,207</b>	<b>67,689</b>	<b>5,088</b>	<b>1,549</b>	<b>172,086</b>	<b>12,665</b>	<b>77,011</b>	<b>386,225</b>

<sup>a</sup> Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

W = Withheld to avoid disclosure of individual company data.

Notes: • Stocks are reported as of the end of December. • Refer to Appendix A for Refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."



Table 19. Percent Refinery Yield of Petroleum Products by PAD and Refining Districts,<sup>a</sup> 1999

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Liquefied Refinery Gases .....	2.6	1.1	2.5	4.4	1.6	2.6	3.7
Finished Motor Gasoline <sup>b</sup> .....	47.1	38.4	46.6	51.8	50.6	49.0	51.1
Finished Aviation Gasoline <sup>c</sup> .....	0.2	0.0	0.2	0.1	0.3	0.3	0.1
Naphtha-Type Jet Fuel .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene-Type Jet Fuel .....	7.3	2.0	7.0	6.7	8.2	5.2	6.6
Kerosene .....	0.7	2.2	0.8	0.6	0.3	0.3	0.5
Distillate Fuel Oil .....	26.4	25.3	26.3	22.7	24.4	32.1	24.8
Residual Fuel Oil .....	6.8	1.6	6.5	1.9	2.1	0.5	1.6
Naphtha for Petrochemical Feedstock Use .....	0.9	0.0	0.8	0.9	0.0	0.0	0.6
Other Oils for Petrochemical Feedstock Use .....	0.0	0.0	0.0	1.0	0.0	0.2	0.7
Special Naphthas .....	0.1	0.9	0.1	0.9	0.0	0.4	0.7
Lubricants .....	0.7	7.3	1.0	0.5	0.0	1.2	0.6
Waxes .....	0.0	0.0	0.0	0.1	0.0	0.2	0.1
Petroleum Coke .....	3.2	1.0	3.1	3.9	6.3	3.9	4.2
Asphalt and Road Oil .....	4.7	17.4	5.4	5.7	9.4	3.3	5.6
Still Gas .....	3.8	2.8	3.7	3.9	3.7	4.3	3.9
Miscellaneous Products .....	0.1	1.3	0.1	0.3	0.6	0.2	0.3
Processing Gain(-) or Loss(+) <sup>d</sup> .....	-4.5	-1.2	-4.4	-5.2	-7.3	-3.8	-5.1

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Liquefied Refinery Gases .....	4.6	7.4	5.2	1.0	2.6	6.1	1.3	2.6	4.5
Finished Motor Gasoline <sup>b</sup> .....	51.7	45.2	43.9	26.3	54.7	44.8	47.8	44.7	46.5
Finished Aviation Gasoline <sup>c</sup> .....	0.7	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.2
Naphtha-Type Jet Fuel .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene-Type Jet Fuel .....	9.0	10.0	13.6	4.4	7.3	11.1	5.4	15.8	10.2
Kerosene .....	0.0	0.7	0.1	1.1	0.0	0.4	0.5	0.2	0.4
Distillate Fuel Oil .....	24.7	19.5	22.1	24.2	26.2	21.1	28.7	18.3	22.3
Residual Fuel Oil .....	1.5	5.1	4.0	3.6	0.6	4.3	2.3	8.5	4.6
Naphtha for Petrochemical Feedstock Use .....	0.7	3.2	1.0	0.0	-0.1	2.1	0.0	0.2	1.3
Other Oils for Petrochemical Feedstock Use .....	0.8	2.7	2.9	0.0	0.0	2.5	0.1	0.3	1.4
Special Naphthas .....	0.5	1.3	0.2	2.9	0.0	0.8	0.0	0.1	0.6
Lubricants .....	0.3	1.5	1.5	12.7	0.0	1.7	0.0	1.0	1.2
Waxes .....	0.0	0.2	0.1	0.8	0.0	0.2	0.7	0.0	0.1
Petroleum Coke .....	1.6	5.1	5.5	1.2	1.3	4.8	3.4	6.1	4.7
Asphalt and Road Oil .....	3.1	0.9	1.3	19.5	5.0	1.7	8.8	2.4	3.3
Still Gas .....	4.2	4.2	4.2	3.0	2.9	4.1	4.1	5.8	4.3
Miscellaneous Products .....	0.3	0.4	0.6	0.0	0.0	0.4	0.4	0.2	0.3
Processing Gain(-) or Loss(+) <sup>d</sup> .....	-3.7	-7.3	-6.4	-0.7	-0.6	-6.4	-3.5	-6.2	-5.8

<sup>a</sup> Based on crude oil input and net reruns of unfinished oils.

<sup>b</sup> Based on total finished motor gasoline output minus net input of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and oxygenates.

<sup>c</sup> Based on finished aviation gasoline output minus net input of aviation gasoline blending components.

<sup>d</sup> Represents the difference between input and production.

Notes: • Totals may not equal sum of components due to independent rounding. • Refer to Appendix A for Refining District descriptions.

Sources: Calculated from data on Tables 16 and 17.

**Table 20. Imports of Crude Oil and Petroleum Products by PAD District, 1999**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
<b>Crude Oil<sup>a,b</sup></b>	<b>548,160</b>	<b>550,001</b>	<b>1,804,816</b>	<b>55,050</b>	<b>228,636</b>	<b>3,186,663</b>	<b>8,731</b>
<b>Natural Gas Liquids</b>	<b>8,838</b>	<b>48,319</b>	<b>20,042</b>	<b>4,042</b>	<b>147</b>	<b>81,388</b>	<b>223</b>
Pentanes Plus	0	892	12,933	1,265	0	15,090	41
Liquefied Petroleum Gases	8,838	47,427	7,109	2,777	147	66,298	182
Ethane	0	6,455	1,261	0	0	7,716	21
Ethylene	0	4,083	0	0	0	4,083	11
Propane	8,321	28,839	2,943	1,895	147	42,145	115
Propylene	0	2,479	0	0	0	2,479	7
Normal Butane	317	2,766	1,808	764	0	5,655	15
Butylene	0	0	0	0	0	0	0
Isobutane	200	2,805	1,097	118	0	4,220	12
Isobutylene	0	0	0	0	0	0	0
<b>Other Liquids</b>	<b>101,495</b>	<b>5</b>	<b>84,773</b>	<b>0</b>	<b>36,181</b>	<b>222,454</b>	<b>609</b>
Other Hydrocarbons/Hydrogen/Oxygenates	5,937	0	0	0	21,520	27,457	75
Other Hydrocarbons/Hydrogen	86	0	0	0	0	86	(s)
Oxygenates	5,851	0	0	0	21,520	27,371	75
Fuel Ethanol	0	0	0	0	87	87	(s)
MTBE	5,851	0	0	0	21,433	27,284	75
Other Oxygenates <sup>c</sup>	0	0	0	0	0	0	0
Unfinished Oils <sup>a</sup>	22,554	5	81,266	0	11,946	115,771	317
Naphthas and Lighter	2,429	5	12,401	0	70	14,905	41
Kerosene and Light Gas Oils	75	0	3,779	0	55	3,909	11
Heavy Gas Oils	16,749	0	35,526	0	578	52,853	145
Residuum	3,301	0	29,560	0	11,243	44,104	121
Motor Gasoline Blending Components	73,004	0	3,507	0	2,715	79,226	217
Aviation Gasoline Blending Components	0	0	0	0	0	0	0
<b>Finished Petroleum Products</b>	<b>313,864</b>	<b>4,468</b>	<b>102,579</b>	<b>2,778</b>	<b>46,880</b>	<b>470,569</b>	<b>1,289</b>
Finished Motor Gasoline	125,913	767	699	139	11,780	139,298	382
Reformulated	65,915	0	267	0	3,263	69,445	190
Oxygenated	0	0	0	0	0	0	0
Other	59,998	767	432	139	8,517	69,853	191
Finished Aviation Gasoline	4	17	0	55	0	76	(s)
Jet Fuel	22,213	4	2	0	24,517	46,736	128
Naphtha-Type	0	4	0	0	0	4	(s)
Kerosene-Type	22,213	0	2	0	24,517	46,732	128
Bonded Aircraft Fuel	11,855	0	0	0	13,150	25,005	69
Other	10,358	0	2	0	11,367	21,727	60
Kerosene	475	1	0	0	0	476	1
Distillate Fuel Oil	79,490	1,609	1,940	2,512	5,877	91,428	250
Bonded Ship Bunkers	0	0	0	7	602	609	2
0.05 percent sulfur and under	0	0	0	7	495	502	1
Greater than 0.05 percent sulfur	0	0	0	0	107	107	(s)
Other	79,490	1,609	1,940	2,505	5,275	90,819	249
0.05 percent sulfur and under	44,885	1,333	0	1,234	3,427	50,879	139
Greater than 0.05 percent sulfur	34,605	276	1,940	1,271	1,848	39,940	109
Residual Fuel Oil	66,826	550	15,735	2	3,230	86,343	237
Bonded Ship Bunkers	0	0	0	0	0	0	0
Less than 0.31 percent sulfur	0	0	0	0	0	0	0
0.31 to 1.00 percent sulfur	0	0	0	0	0	0	0
Greater than 1.00 percent sulfur	0	0	0	0	0	0	0
Other	66,826	550	15,735	2	3,230	86,343	237
Less than 0.31 percent sulfur	14,644	507	1,662	1	1,868	18,682	51
0.31 to 1.00 percent sulfur	13,039	0	5,351	1	0	18,391	50
Greater than 1.00 percent sulfur	39,143	43	8,722	0	1,362	49,270	135
Naphtha for Petrochemical Feedstock Use	2,223	587	23,168	0	145	26,123	72
Other Oils for Petrochemical Feedstock Use	532	21	58,772	0	728	60,053	165
Special Naphthas	602	341	1,197	0	0	2,140	6
Lubricants	3,516	350	107	0	0	3,973	11
Waxes	459	81	175	0	256	971	3
Petroleum Coke	0	0	0	0	347	347	1
Asphalt and Road Oil	11,611	128	733	70	0	12,542	34
Miscellaneous Products	0	12	51	0	0	63	(s)
<b>Total</b>	<b>972,357</b>	<b>602,793</b>	<b>2,012,210</b>	<b>61,870</b>	<b>311,844</b>	<b>3,961,074</b>	<b>10,852</b>

<sup>a</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>b</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

<sup>c</sup> Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 21. Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,<sup>a</sup> 1999**  
(Thousand Barrels)

Country of Origin	Crude Oil <sup>b</sup>	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
<b>Arab OPEC</b>	<b>870,587</b>	<b>4,513</b>	<b>19,419</b>	<b>2,560</b>	<b>15,147</b>	<b>1,219</b>	<b>3,112</b>	<b>14,613</b>	<b>0</b>	<b>0</b>
Algeria	9,305	4,513	14,688	492	443	0	859	14,548	0	0
Iraq	264,764	0	0	0	0	0	0	0	0	0
Kuwait	89,914	0	0	0	0	640	0	0	0	0
Qatar	332	0	1,908	55	111	0	0	0	0	0
Saudi Arabia	506,272	0	2,240	1,850	14,593	579	2,253	65	0	0
United Arab Emirates	0	0	583	163	0	0	0	0	0	0
<b>Other OPEC</b>	<b>672,735</b>	<b>3,193</b>	<b>27,187</b>	<b>16,206</b>	<b>23,496</b>	<b>11,140</b>	<b>20,883</b>	<b>18,836</b>	<b>0</b>	<b>0</b>
Indonesia	25,371	0	2,099	0	0	0	0	1,988	0	0
Nigeria	227,471	413	8,901	788	11	0	900	1,065	0	0
Venezuela	419,893	2,780	16,187	15,418	23,485	11,140	19,983	15,783	0	0
<b>Non OPEC</b>	<b>1,643,341</b>	<b>58,592</b>	<b>69,165</b>	<b>60,460</b>	<b>100,655</b>	<b>34,377</b>	<b>67,433</b>	<b>52,894</b>	<b>476</b>	<b>2,140</b>
Angola	130,168	0	0	0	0	689	0	0	0	0
Argentina	32,564	0	155	4,862	2,552	0	0	328	0	0
Australia	11,481	0	0	160	455	69	393	0	0	0
Bahamas	0	0	368	0	443	0	0	346	0	0
Belgium	0	0	4,938	5,345	1,953	0	176	109	0	0
Benin	202	0	0	0	0	0	0	0	0	0
Brazil	0	0	1,905	2,534	2,644	0	0	799	0	803
Brunei	16,858	0	0	0	0	0	0	0	0	0
Cameroon	1,624	0	0	185	0	0	0	76	0	0
Canada	429,962	55,130	2,107	1,620	20,576	1,740	28,191	6,849	476	892
China, People's Republic of	4,763	0	42	1,715	642	262	0	0	0	0
Colombia	165,078	0	2,017	293	0	749	0	2,193	0	0
Congo (Brazzaville)	16,645	0	0	0	0	0	0	0	0	0
Congo (Kinshasa) <sup>d</sup>	900	0	0	0	0	0	0	0	0	0
Denmark	0	0	398	0	41	0	0	0	0	0
Ecuador	41,567	0	172	359	0	0	0	828	0	0
Egypt	8,127	0	0	267	0	0	0	0	0	0
France	0	0	3,415	1,816	1,431	0	0	0	0	0
Gabon	61,247	0	0	0	0	0	0	0	0	0
Germany, FR	0	0	2,634	1,364	746	0	0	3,801	0	0
Greece	0	0	144	0	0	0	0	0	0	0
Guatemala	7,632	0	262	0	0	0	0	0	0	0
India	0	0	0	196	0	0	0	0	0	0
Ireland	0	0	556	0	0	0	0	0	0	0
Italy	0	0	215	2,138	753	0	0	0	0	162
Ivory Coast	364	0	292	0	0	0	0	0	0	0
Japan	0	0	70	0	1,484	1,461	1,745	0	0	0
Korea, Republic of	0	0	0	719	1,959	6,439	0	0	0	144
Malaysia	7,708	0	3,121	0	0	534	468	0	0	0
Mexico	457,655	0	3,583	3,397	0	1,393	0	5,059	0	0
Netherlands	0	0	734	3,340	2,848	0	0	623	0	0
Netherlands Antilles	0	0	10,025	0	51	4,898	507	4,372	0	0
Norway	96,147	2,231	4,052	64	1,947	0	0	391	0	0
Panama	0	0	101	0	0	0	0	0	0	0
Peru	9,227	0	313	0	0	0	0	1,368	0	0
Portugal	0	0	343	1,050	3,897	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0
Romania	0	0	0	1,631	276	0	0	0	0	0
Russia	7,725	0	8,909	1,536	304	156	5,612	4,402	0	0
Singapore	0	0	1,940	527	1,022	5,462	202	0	0	0
Spain	0	0	110	1,829	810	0	0	193	0	0
Sweden	0	0	1,258	0	19	0	0	506	0	0
Syria	687	0	0	0	0	0	0	330	0	0
Thailand	343	0	0	91	241	294	0	0	0	0
Trinidad and Tobago	14,748	0	626	1,572	159	0	711	2,654	0	0
Turkey	0	0	770	0	0	0	0	0	0	0
United Kingdom	103,716	1,231	5,110	14,519	4,285	0	975	2,482	0	20
Virgin Islands, U.S.	491	0	3,690	644	44,894	9,832	27,756	14,237	0	105
Yemen	335	0	541	0	0	0	0	0	0	0
Other	15,377	0	4,249	6,687	4,223	399	697	948	0	14
<b>Total</b>	<b>3,186,663</b>	<b>66,298</b>	<b>115,771</b>	<b>79,226</b>	<b>139,298</b>	<b>46,736</b>	<b>91,428</b>	<b>86,343</b>	<b>476</b>	<b>2,140</b>
<b>Persian Gulf<sup>e</sup></b>	<b>861,282</b>	<b>0</b>	<b>4,731</b>	<b>2,068</b>	<b>14,704</b>	<b>1,219</b>	<b>2,253</b>	<b>65</b>	<b>0</b>	<b>0</b>

See footnotes at end of table.



**Table 21. Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,<sup>a</sup> 1999 (Continued)**  
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products <sup>c</sup>	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
<b>Arab OPEC</b> .....	<b>1,835</b>	<b>35,966</b>	<b>0</b>	<b>0</b>	<b>24,643</b>	<b>123,027</b>	<b>993,614</b>	<b>2,385</b>	<b>337</b>	<b>2,722</b>
Algeria .....	1,760	34,832	0	0	12,933	85,068	94,373	25	233	259
Iraq .....	0	0	0	0	0	0	264,764	725	0	725
Kuwait .....	0	0	0	0	0	640	90,554	246	2	248
Qatar .....	75	1,038	0	0	0	3,187	3,519	1	9	10
Saudi Arabia .....	0	0	0	0	11,710	33,290	539,562	1,387	91	1,478
United Arab Emirates .....	0	96	0	0	0	842	842	0	2	2
<b>Other OPEC</b> .....	<b>4,209</b>	<b>3,504</b>	<b>15</b>	<b>8,579</b>	<b>4,191</b>	<b>141,439</b>	<b>814,174</b>	<b>1,843</b>	<b>388</b>	<b>2,231</b>
Indonesia .....	0	263	0	0	12	4,362	29,733	70	12	81
Nigeria .....	94	0	0	0	0	12,172	239,643	623	33	657
Venezuela .....	4,115	3,241	15	8,579	4,179	124,905	544,798	1,150	342	1,493
<b>Non OPEC</b> .....	<b>20,079</b>	<b>20,583</b>	<b>3,958</b>	<b>3,963</b>	<b>15,170</b>	<b>509,945</b>	<b>2,153,286</b>	<b>4,502</b>	<b>1,397</b>	<b>5,899</b>
Angola .....	0	728	0	0	0	1,417	131,585	357	4	361
Argentina .....	340	0	0	0	0	8,237	40,801	89	23	112
Australia .....	0	2,729	0	0	0	3,806	15,287	31	10	42
Bahamas .....	0	0	0	0	0	1,157	1,157	0	3	3
Belgium .....	21	0	0	0	0	12,542	12,542	0	34	34
Benin .....	0	0	0	0	0	0	202	1	0	1
Brazil .....	110	0	0	0	659	9,454	9,454	0	26	26
Brunei .....	0	0	0	0	0	0	16,858	46	0	46
Cameroon .....	0	0	0	0	0	261	1,885	4	1	5
Canada .....	1,386	21	1,371	1,813	9,747	131,919	561,881	1,178	361	1,539
China, People's Republic of .....	0	0	0	0	275	2,936	7,699	13	8	21
Colombia .....	652	0	0	0	0	5,904	170,982	452	16	468
Congo (Brazzaville) .....	0	0	0	0	0	0	16,645	46	0	46
Congo (Kinshasa) <sup>d</sup> .....	0	0	0	0	0	0	900	2	0	2
Denmark .....	0	0	0	0	0	439	439	0	1	1
Ecuador .....	0	93	0	0	0	1,452	43,019	114	4	118
Egypt .....	264	0	0	0	2	533	8,660	22	1	24
France .....	0	0	48	0	1,766	8,476	8,476	0	23	23
Gabon .....	0	0	0	0	0	0	61,247	168	0	168
Germany, FR .....	0	0	0	0	52	8,597	8,597	0	24	24
Greece .....	748	0	0	0	0	892	892	0	2	2
Guatemala .....	0	0	0	0	0	262	7,894	21	1	22
India .....	0	0	0	0	0	196	196	0	1	1
Ireland .....	0	0	0	0	0	556	556	0	2	2
Italy .....	312	0	0	0	0	3,580	3,580	0	10	10
Ivory Coast .....	0	0	0	0	0	292	656	1	1	2
Japan .....	60	0	0	0	83	4,903	4,903	0	13	13
Korea, Republic of .....	145	565	24	0	908	10,903	10,903	0	30	30
Malaysia .....	0	832	0	0	0	4,955	12,663	21	14	35
Mexico .....	8,662	2,438	0	1,142	56	25,730	483,385	1,254	70	1,324
Netherlands .....	858	255	20	0	1,032	9,710	9,710	0	27	27
Netherlands Antilles .....	2,744	750	0	445	0	23,792	23,792	0	65	65
Norway .....	0	5,962	0	0	0	14,647	110,794	263	40	304
Panama .....	0	0	0	0	0	101	101	0	(s)	(s)
Peru .....	209	0	0	0	0	1,890	11,117	25	5	30
Portugal .....	0	0	0	0	0	5,290	5,290	0	14	14
Puerto Rico .....	2,083	0	2,495	0	0	4,578	4,578	0	13	13
Romania .....	0	0	0	0	0	1,907	1,907	0	5	5
Russia .....	860	3,107	0	0	0	24,886	32,611	21	68	89
Singapore .....	0	0	0	0	66	9,219	9,219	0	25	25
Spain .....	0	263	0	563	0	3,768	3,768	0	10	10
Sweden .....	0	302	0	0	0	2,085	2,085	0	6	6
Syria .....	0	0	0	0	0	330	1,017	2	1	3
Thailand .....	0	0	0	0	0	626	969	1	2	3
Trinidad and Tobago .....	445	270	0	0	0	6,437	21,185	40	18	58
Turkey .....	0	0	0	0	0	770	770	0	2	2
United Kingdom .....	63	532	0	0	134	29,351	133,067	284	80	365
Virgin Islands, U.S. ....	117	0	0	0	291	101,566	102,057	1	278	280
Yemen .....	0	0	0	0	0	541	876	1	1	2
Other .....	0	1,736	0	0	99	19,052	34,429	42	52	94
<b>Total</b> .....	<b>26,123</b>	<b>60,053</b>	<b>3,973</b>	<b>12,542</b>	<b>44,004</b>	<b>774,411</b>	<b>3,961,074</b>	<b>8,731</b>	<b>2,122</b>	<b>10,852</b>
<b>Persian Gulf<sup>e</sup></b> .....	<b>75</b>	<b>1,134</b>	<b>0</b>	<b>0</b>	<b>11,710</b>	<b>37,959</b>	<b>899,241</b>	<b>2,360</b>	<b>104</b>	<b>2,464</b>

<sup>a</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>b</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

<sup>c</sup> Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

<sup>d</sup> Formerly Zaire.

<sup>e</sup> Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 22. PAD District I—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999**  
(Thousand Barrels)

Country of Origin	Crude Oil <sup>b</sup>	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphtha
<b>Arab OPEC</b> .....	<b>58,985</b>	<b>2,179</b>	<b>454</b>	<b>2,352</b>	<b>14,597</b>	<b>90</b>	<b>2,016</b>	<b>14,548</b>	<b>0</b>	<b>0</b>
Algeria .....	3,393	2,179	454	447	443	0	0	14,548	0	0
Iraq .....	2,633	0	0	0	0	0	0	0	0	0
Qatar .....	0	0	0	55	111	0	0	0	0	0
Saudi Arabia .....	52,959	0	0	1,850	14,043	90	2,016	0	0	0
<b>Other OPEC</b> .....	<b>153,746</b>	<b>1,187</b>	<b>3,195</b>	<b>14,450</b>	<b>23,496</b>	<b>6,519</b>	<b>20,376</b>	<b>16,086</b>	<b>0</b>	<b>0</b>
Indonesia .....	0	0	0	0	0	0	0	634	0	0
Nigeria .....	93,069	413	255	346	11	0	393	372	0	0
Venezuela .....	60,677	774	2,940	14,104	23,485	6,519	19,983	15,080	0	0
<b>Non OPEC</b> .....	<b>335,429</b>	<b>5,472</b>	<b>18,905</b>	<b>56,202</b>	<b>87,820</b>	<b>15,604</b>	<b>57,098</b>	<b>36,192</b>	<b>475</b>	<b>602</b>
Angola .....	82,040	0	0	0	0	689	0	0	0	0
Argentina .....	2,741	0	155	4,862	2,552	0	0	263	0	0
Bahamas .....	0	0	0	0	443	0	0	346	0	0
Belgium .....	0	0	359	5,345	1,560	0	176	109	0	0
Brazil .....	0	0	1,905	2,402	2,644	0	0	799	0	329
Cameroon .....	809	0	0	185	0	0	0	0	0	0
Canada .....	55,847	3,224	326	1,488	19,432	607	22,178	6,020	475	273
China, People's Republic of .....	0	0	0	1,115	434	0	0	0	0	0
Colombia .....	34,134	0	1,421	75	0	476	0	2,193	0	0
Congo (Brazzaville) .....	6,352	0	0	0	0	0	0	0	0	0
Congo (Kinshasa) <sup>d</sup> .....	900	0	0	0	0	0	0	0	0	0
Denmark .....	0	0	282	0	41	0	0	0	0	0
Ecuador .....	8,034	0	0	179	0	0	0	316	0	0
Egypt .....	7,061	0	0	267	0	0	0	0	0	0
France .....	0	0	925	1,780	1,431	0	0	0	0	0
Gabon .....	40,353	0	0	0	0	0	0	0	0	0
Germany, FR .....	0	0	156	1,364	514	0	0	0	0	0
India .....	0	0	0	196	0	0	0	0	0	0
Ireland .....	0	0	556	0	0	0	0	0	0	0
Italy .....	0	0	215	2,138	753	0	0	0	0	0
Ivory Coast .....	364	0	0	0	0	0	0	0	0	0
Japan .....	0	0	0	0	0	0	0	0	0	0
Korea, Republic of .....	0	0	0	198	0	201	0	0	0	0
Mexico .....	9,288	0	2,328	2,741	0	150	0	1,372	0	0
Netherlands .....	0	0	189	3,340	2,155	0	0	623	0	0
Netherlands Antilles .....	0	0	330	0	51	4,207	507	4,372	0	0
Norway .....	56,569	1,017	331	64	1,947	0	0	80	0	0
Peru .....	364	0	313	0	0	0	0	602	0	0
Portugal .....	0	0	0	1,050	3,897	0	0	0	0	0
Puerto Rico .....	0	0	0	0	0	0	0	0	0	0
Romania .....	0	0	0	1,631	276	0	0	0	0	0
Russia .....	474	0	1,086	1,536	304	0	5,568	0	0	0
Singapore .....	0	0	0	199	117	0	0	0	0	0
Spain .....	0	0	110	1,829	810	0	0	0	0	0
Sweden .....	0	0	775	0	19	0	0	181	0	0
Syria .....	0	0	0	0	0	0	0	330	0	0
Thailand .....	0	0	0	91	13	0	0	0	0	0
Trinidad and Tobago .....	459	0	626	1,093	159	0	711	2,654	0	0
Turkey .....	0	0	349	0	0	0	0	0	0	0
United Kingdom .....	27,946	1,231	2,536	14,186	2,881	0	763	1,393	0	0
Virgin Islands, U.S. ....	0	0	3,000	644	43,851	9,274	26,623	14,237	0	0
Other .....	1,694	0	632	6,204	1,536	0	572	302	0	0
<b>Total</b> .....	<b>548,160</b>	<b>8,838</b>	<b>22,554</b>	<b>73,004</b>	<b>125,913</b>	<b>22,213</b>	<b>79,490</b>	<b>66,826</b>	<b>475</b>	<b>602</b>
<b>Persian Gulf<sup>e</sup></b> .....	<b>55,592</b>	<b>0</b>	<b>0</b>	<b>1,905</b>	<b>14,154</b>	<b>90</b>	<b>2,016</b>	<b>0</b>	<b>0</b>	<b>0</b>

See footnotes at end of table.



**Table 22. PAD District I—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999 (Continued)**  
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products <sup>c</sup>	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
<b>Arab OPEC</b> .....	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,044</b>	<b>37,355</b>	<b>96,340</b>	<b>162</b>	<b>102</b>	<b>264</b>
Algeria .....	0	0	0	0	0	18,071	21,464	9	50	59
Iraq .....	0	0	0	0	0	0	2,633	7	0	7
Qatar .....	75	0	0	0	0	241	241	0	1	1
Saudi Arabia .....	0	0	0	0	1,044	19,043	72,002	145	52	197
<b>Other OPEC</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,214</b>	<b>1,206</b>	<b>94,729</b>	<b>248,475</b>	<b>421</b>	<b>260</b>	<b>681</b>
Indonesia .....	0	0	0	0	0	634	634	0	2	2
Nigeria .....	0	0	0	0	0	1,790	94,859	255	5	260
Venezuela .....	0	0	0	8,214	1,206	92,305	152,982	166	253	419
<b>Non OPEC</b> .....	<b>2,148</b>	<b>532</b>	<b>3,516</b>	<b>3,397</b>	<b>4,150</b>	<b>292,113</b>	<b>627,542</b>	<b>919</b>	<b>800</b>	<b>1,719</b>
Angola .....	0	0	0	0	0	689	82,729	225	2	227
Argentina .....	0	0	0	0	0	7,832	10,573	8	21	29
Bahamas .....	0	0	0	0	0	789	789	0	2	2
Belgium .....	0	0	0	0	0	7,549	7,549	0	21	21
Brazil .....	0	0	0	0	600	8,679	8,679	0	24	24
Cameroon .....	0	0	0	0	0	185	994	2	1	3
Canada .....	217	0	1,021	1,615	279	57,155	113,002	153	157	310
China, People's Republic of .....	0	0	0	0	41	1,590	1,590	0	4	4
Colombia .....	0	0	0	0	0	4,165	38,299	94	11	105
Congo (Brazzaville) .....	0	0	0	0	0	0	6,352	17	0	17
Congo (Kinshasa) .....	0	0	0	0	0	0	900	2	0	2
Denmark .....	0	0	0	0	0	323	323	0	1	1
Ecuador .....	0	0	0	0	0	495	8,529	22	1	23
Egypt .....	0	0	0	0	0	267	7,328	19	1	20
France .....	0	0	0	0	1,766	5,902	5,902	0	16	16
Gabon .....	0	0	0	0	0	0	40,353	111	0	111
Germany, FR .....	0	0	0	0	52	2,086	2,086	0	6	6
India .....	0	0	0	0	0	196	196	0	1	1
Ireland .....	0	0	0	0	0	556	556	0	2	2
Italy .....	0	0	0	0	0	3,106	3,106	0	9	9
Ivory Coast .....	0	0	0	0	0	0	364	1	0	1
Japan .....	29	0	0	0	37	66	66	0	(s)	(s)
Korea, Republic of .....	0	0	0	0	0	399	399	0	1	1
Mexico .....	0	0	0	956	0	7,547	16,835	25	21	46
Netherlands .....	0	0	0	0	1,032	7,339	7,339	0	20	20
Netherlands Antilles .....	0	0	0	263	0	9,730	9,730	0	27	27
Norway .....	0	0	0	0	0	3,439	60,008	155	9	164
Peru .....	0	0	0	0	0	915	1,279	1	3	4
Portugal .....	0	0	0	0	0	4,947	4,947	0	14	14
Puerto Rico .....	1,902	0	2,495	0	0	4,397	4,397	0	12	12
Romania .....	0	0	0	0	0	1,907	1,907	0	5	5
Russia .....	0	0	0	0	0	8,494	8,968	1	23	25
Singapore .....	0	0	0	0	0	316	316	0	1	1
Spain .....	0	0	0	563	0	3,312	3,312	0	9	9
Sweden .....	0	0	0	0	0	975	975	0	3	3
Syria .....	0	0	0	0	0	330	330	0	1	1
Thailand .....	0	0	0	0	0	104	104	0	(s)	(s)
Trinidad and Tobago .....	0	0	0	0	0	5,243	5,702	1	14	16
Turkey .....	0	0	0	0	0	349	349	0	1	1
United Kingdom .....	0	532	0	0	0	23,522	51,468	77	64	141
Virgin Islands, U.S. ....	0	0	0	0	291	97,920	97,920	0	268	268
Other .....	0	0	0	0	52	9,298	10,992	5	25	30
<b>Total</b> .....	<b>2,223</b>	<b>532</b>	<b>3,516</b>	<b>11,611</b>	<b>6,400</b>	<b>424,197</b>	<b>972,357</b>	<b>1,502</b>	<b>1,162</b>	<b>2,664</b>
<b>Persian Gulf<sup>a</sup></b> .....	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,044</b>	<b>19,284</b>	<b>74,876</b>	<b>152</b>	<b>53</b>	<b>205</b>

<sup>a</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.  
<sup>b</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.  
<sup>c</sup> Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and naphtha.  
<sup>d</sup> Formerly Zaire.  
<sup>e</sup> Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.  
(s) = Less than 500 barrels per day.  
Note: Totals may not equal sum of components due to independent rounding.  
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."



**Table 23. PAD District II—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999**  
(Thousand Barrels)

Country of Origin	Crude Oil <sup>b</sup>	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
<b>Arab OPEC</b> .....	<b>100,913</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Iraq .....	23,618	0	0	0	0	0	0	0	0	0
Kuwait .....	9,614	0	0	0	0	0	0	0	0	0
Saudi Arabia .....	67,681	0	0	0	0	0	0	0	0	0
<b>Other OPEC</b> .....	<b>88,956</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Nigeria .....	33,708	0	0	0	0	0	0	0	0	0
Venezuela .....	55,248	0	0	0	0	0	0	0	0	0
<b>Non OPEC</b> .....	<b>360,132</b>	<b>47,427</b>	<b>5</b>	<b>0</b>	<b>767</b>	<b>4</b>	<b>1,609</b>	<b>550</b>	<b>1</b>	<b>341</b>
Angola .....	13,206	0	0	0	0	0	0	0	0	0
Canada .....	295,562	47,427	5	0	767	4	1,609	550	1	341
Colombia .....	25,020	0	0	0	0	0	0	0	0	0
Congo (Brazzaville) .....	349	0	0	0	0	0	0	0	0	0
Ecuador .....	730	0	0	0	0	0	0	0	0	0
Mexico .....	12,846	0	0	0	0	0	0	0	0	0
Norway .....	5,162	0	0	0	0	0	0	0	0	0
Russia .....	521	0	0	0	0	0	0	0	0	0
United Kingdom .....	6,736	0	0	0	0	0	0	0	0	0
Other .....	0	0	0	0	0	0	0	0	0	0
<b>Total</b> .....	<b>550,001</b>	<b>47,427</b>	<b>5</b>	<b>0</b>	<b>767</b>	<b>4</b>	<b>1,609</b>	<b>550</b>	<b>1</b>	<b>341</b>
<b>Persian Gulf<sup>c</sup></b> .....	<b>100,913</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

See footnotes at end of table.

**Table 23. PAD District II—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999 (Continued)**  
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products <sup>c</sup>	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC .....	0	0	0	0	0	0	100,913	276	0	276
Iraq .....	0	0	0	0	0	0	23,618	65	0	65
Kuwait .....	0	0	0	0	0	0	9,614	26	0	26
Saudi Arabia .....	0	0	0	0	0	0	67,681	185	0	185
Other OPEC .....	0	0	0	0	0	0	88,956	244	0	244
Nigeria .....	0	0	0	0	0	0	33,708	92	0	92
Venezuela .....	0	0	0	0	0	0	55,248	151	0	151
Non OPEC .....	587	21	350	128	1,002	52,792	412,924	987	145	1,131
Angola .....	0	0	0	0	0	0	13,206	36	0	36
Canada .....	587	21	350	128	992	52,782	348,344	810	145	954
Colombia .....	0	0	0	0	0	0	25,020	69	0	69
Congo (Brazzaville) .....	0	0	0	0	0	0	349	1	0	1
Ecuador .....	0	0	0	0	0	0	730	2	0	2
Mexico .....	0	0	0	0	0	0	12,846	35	0	35
Norway .....	0	0	0	0	0	0	5,162	14	0	14
Russia .....	0	0	0	0	0	0	521	1	0	1
United Kingdom .....	0	0	0	0	0	0	6,736	18	0	18
Other .....	0	0	0	0	10	10	10	0	(s)	(s)
<b>Total .....</b>	<b>587</b>	<b>21</b>	<b>350</b>	<b>128</b>	<b>1,002</b>	<b>52,792</b>	<b>602,793</b>	<b>1,507</b>	<b>145</b>	<b>1,651</b>
Persian Gulf <sup>e</sup> .....	0	0	0	0	0	0	100,913	276	0	276

<sup>a</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>b</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

<sup>c</sup> Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

<sup>d</sup> Formerly Zaire.

<sup>e</sup> Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 24. PAD District III—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999**  
(Thousand Barrels)

Country of Origin	Crude Oil <sup>b</sup>	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
<b>Arab OPEC</b>	<b>634,738</b>	<b>2,334</b>	<b>18,268</b>	<b>208</b>	<b>0</b>	<b>0</b>	<b>1,096</b>	<b>65</b>	<b>0</b>	<b>0</b>
Algeria	5,912	2,334	13,537	45	0	0	859	0	0	0
Iraq	190,102	0	0	0	0	0	0	0	0	0
Kuwait	74,117	0	0	0	0	0	0	0	0	0
Qatar	0	0	1,908	0	0	0	0	0	0	0
Saudi Arabia	364,607	0	2,240	0	0	0	237	65	0	0
United Arab Emirates	0	0	583	163	0	0	0	0	0	0
<b>Other OPEC</b>	<b>402,740</b>	<b>2,006</b>	<b>22,107</b>	<b>1,552</b>	<b>0</b>	<b>0</b>	<b>507</b>	<b>1,354</b>	<b>0</b>	<b>0</b>
Indonesia	0	0	1,160	0	0	0	0	0	0	0
Nigeria	100,694	0	8,646	238	0	0	507	693	0	0
Venezuela	302,046	2,006	12,301	1,314	0	0	0	661	0	0
<b>Non OPEC</b>	<b>767,338</b>	<b>2,769</b>	<b>40,891</b>	<b>1,747</b>	<b>699</b>	<b>2</b>	<b>337</b>	<b>14,316</b>	<b>0</b>	<b>1,197</b>
Angola	33,479	0	0	0	0	0	0	0	0	0
Argentina	17,244	0	0	0	0	0	0	65	0	0
Australia	0	0	0	0	0	0	0	0	0	0
Belgium	0	0	4,579	0	0	0	0	0	0	0
Brazil	0	0	0	132	0	0	0	0	0	474
Brunei	9,527	0	0	0	0	0	0	0	0	0
Cameroon	815	0	0	0	0	0	0	0	0	0
Canada	915	1,555	1,540	46	0	0	0	0	0	278
Colombia	105,543	0	596	218	0	0	0	0	0	0
Congo (Brazzaville)	9,221	0	0	0	0	0	0	0	0	0
Denmark	0	0	116	0	0	0	0	0	0	0
Ecuador	1,460	0	172	180	0	0	0	0	0	0
Egypt	1,066	0	0	0	0	0	0	0	0	0
France	0	0	2,490	36	0	0	0	0	0	0
Gabon	20,894	0	0	0	0	0	0	0	0	0
Germany, FR	0	0	1,721	0	0	0	0	3,801	0	0
Greece	0	0	144	0	0	0	0	0	0	0
Guatemala	7,632	0	262	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0	0	0	162
Japan	0	0	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	0	0	0	0	0	0	0	144
Malaysia	590	0	0	0	0	0	0	0	0	0
Mexico	423,179	0	1,255	656	0	2	0	3,379	0	0
Netherlands	0	0	545	0	267	0	0	0	0	0
Netherlands Antilles	0	0	7,518	0	0	0	0	0	0	0
Norway	34,416	1,214	3,721	0	0	0	0	0	0	0
Panama	0	0	101	0	0	0	0	0	0	0
Peru	4,226	0	0	0	0	0	0	416	0	0
Portugal	0	0	343	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0
Russia	6,730	0	7,823	0	0	0	0	4,402	0	0
Spain	0	0	0	0	0	0	0	193	0	0
Sweden	0	0	483	0	0	0	0	325	0	0
Syria	687	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	14,289	0	0	479	0	0	0	0	0	0
Turkey	0	0	421	0	0	0	0	0	0	0
United Kingdom	69,034	0	2,574	0	0	0	212	1,089	0	20
Virgin Islands, U.S.	491	0	329	0	0	0	0	0	0	105
Yemen	0	0	541	0	0	0	0	0	0	0
Other	5,698	0	3,617	0	432	0	125	646	0	14
<b>Total</b>	<b>1,804,816</b>	<b>7,109</b>	<b>81,266</b>	<b>3,507</b>	<b>699</b>	<b>2</b>	<b>1,940</b>	<b>15,735</b>	<b>0</b>	<b>1,197</b>
<b>Persian Gulf<sup>c</sup></b>	<b>628,826</b>	<b>0</b>	<b>4,731</b>	<b>163</b>	<b>0</b>	<b>0</b>	<b>237</b>	<b>65</b>	<b>0</b>	<b>0</b>

See footnotes at end of table.



**Table 24. PAD District III—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999 (Continued)**  
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products <sup>c</sup>	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
<b>Arab OPEC</b> .....	<b>1,760</b>	<b>35,966</b>	<b>0</b>	<b>0</b>	<b>12,933</b>	<b>72,630</b>	<b>707,368</b>	<b>1,739</b>	<b>199</b>	<b>1,938</b>
Algeria .....	1,760	34,832	0	0	12,933	66,300	72,212	16	182	198
Iraq .....	0	0	0	0	0	0	190,102	521	0	521
Kuwait .....	0	0	0	0	0	0	74,117	203	0	203
Qatar .....	0	1,038	0	0	0	2,946	2,946	0	8	8
Saudi Arabia .....	0	0	0	0	0	2,542	367,149	999	7	1,006
United Arab Emirates .....	0	96	0	0	0	842	842	0	2	2
<b>Other OPEC</b> .....	<b>4,209</b>	<b>2,776</b>	<b>15</b>	<b>365</b>	<b>12</b>	<b>34,903</b>	<b>437,643</b>	<b>1,103</b>	<b>96</b>	<b>1,199</b>
Indonesia .....	0	263	0	0	12	1,435	1,435	0	4	4
Nigeria .....	94	0	0	0	0	10,178	110,872	276	28	304
Venezuela .....	4,115	2,513	15	365	0	23,290	325,336	828	64	891
<b>Non OPEC</b> .....	<b>17,199</b>	<b>20,030</b>	<b>92</b>	<b>368</b>	<b>214</b>	<b>99,861</b>	<b>867,199</b>	<b>2,102</b>	<b>274</b>	<b>2,376</b>
Angola .....	0	728	0	0	0	728	34,207	92	2	94
Argentina .....	340	0	0	0	0	405	17,649	47	1	48
Australia .....	0	2,729	0	0	0	2,729	2,729	0	7	7
Belgium .....	21	0	0	0	0	4,600	4,600	0	13	13
Brazil .....	110	0	0	0	0	716	716	0	2	2
Brunei .....	0	0	0	0	0	0	9,527	26	0	26
Cameroon .....	0	0	0	0	0	0	815	2	0	2
Canada .....	582	0	0	0	0	4,001	4,916	3	11	13
Colombia .....	652	0	0	0	0	1,466	107,009	289	4	293
Congo (Brazzaville) .....	0	0	0	0	0	0	9,221	25	0	25
Denmark .....	0	0	0	0	0	116	116	0	(s)	(s)
Ecuador .....	0	93	0	0	0	445	1,905	4	1	5
Egypt .....	264	0	0	0	2	266	1,332	3	1	4
France .....	0	0	48	0	0	2,574	2,574	0	7	7
Gabon .....	0	0	0	0	0	0	20,894	57	0	57
Germany, FR .....	0	0	0	0	0	5,522	5,522	0	15	15
Greece .....	748	0	0	0	0	892	892	0	2	2
Guatemala .....	0	0	0	0	0	262	7,894	21	1	22
Italy .....	312	0	0	0	0	474	474	0	1	1
Japan .....	31	0	0	0	40	71	71	0	(s)	(s)
Korea, Republic of .....	0	565	24	0	1	734	734	0	2	2
Malaysia .....	0	832	0	0	0	832	1,422	2	2	4
Mexico .....	8,662	2,438	0	186	0	16,578	439,757	1,159	45	1,205
Netherlands .....	858	255	20	0	0	1,945	1,945	0	5	5
Netherlands Antilles .....	2,744	750	0	182	0	11,194	11,194	0	31	31
Norway .....	0	5,962	0	0	0	10,897	45,313	94	30	124
Panama .....	0	0	0	0	0	101	101	0	(s)	(s)
Peru .....	209	0	0	0	0	625	4,851	12	2	13
Portugal .....	0	0	0	0	0	343	343	0	1	1
Puerto Rico .....	181	0	0	0	0	181	181	0	(s)	(s)
Russia .....	860	3,107	0	0	0	16,192	22,922	18	44	63
Spain .....	0	263	0	0	0	456	456	0	1	1
Sweden .....	0	302	0	0	0	1,110	1,110	0	3	3
Syria .....	0	0	0	0	0	0	687	2	0	2
Trinidad and Tobago .....	445	270	0	0	0	1,194	15,483	39	3	42
Turkey .....	0	0	0	0	0	421	421	0	1	1
United Kingdom .....	63	0	0	0	134	4,092	73,126	189	11	200
Virgin Islands, U.S. ....	117	0	0	0	0	551	1,042	1	2	3
Yemen .....	0	0	0	0	0	541	541	0	1	1
Other .....	0	1,736	0	0	37	6,607	12,305	16	18	34
<b>Total</b> .....	<b>23,168</b>	<b>58,772</b>	<b>107</b>	<b>733</b>	<b>13,159</b>	<b>207,394</b>	<b>2,012,210</b>	<b>4,945</b>	<b>568</b>	<b>5,513</b>
<b>Persian Gulf<sup>e</sup></b> .....	<b>0</b>	<b>1,134</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,330</b>	<b>635,156</b>	<b>1,723</b>	<b>17</b>	<b>1,740</b>

<sup>a</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.  
<sup>b</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.  
<sup>c</sup> Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.  
<sup>d</sup> Formerly Zaire.  
<sup>e</sup> Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.  
(s) = Less than 500 barrels per day.  
Note: Totals may not equal sum of components due to independent rounding.  
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 25. PAD Districts IV and V—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999**  
(Thousand Barrels)

Country of Origin	Crude Oil <sup>b</sup>	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
<b>PAD District IV</b>										
<b>Non OPEC</b> .....	55,050	2,777	0	0	139	0	2,512	2	0	0
Canada .....	54,503	2,777	0	0	139	0	2,512	2	0	0
Mexico .....	547	0	0	0	0	0	0	0	0	0
<b>Total</b> .....	55,050	2,777	0	0	139	0	2,512	2	0	0
<b>PAD District V</b>										
<b>Arab OPEC</b> .....	75,951	0	697	0	550	1,129	0	0	0	0
Algeria .....	0	0	697	0	0	0	0	0	0	0
Iraq .....	48,411	0	0	0	0	0	0	0	0	0
Kuwait .....	6,183	0	0	0	0	640	0	0	0	0
Qatar .....	332	0	0	0	0	0	0	0	0	0
Saudi Arabia .....	21,025	0	0	0	550	489	0	0	0	0
<b>Other OPEC</b> .....	27,293	0	1,885	204	0	4,621	0	1,396	0	0
Indonesia .....	25,371	0	939	0	0	0	0	1,354	0	0
Nigeria .....	0	0	0	204	0	0	0	0	0	0
Venezuela .....	1,922	0	946	0	0	4,621	0	42	0	0
<b>Non OPEC</b> .....	125,392	147	9,364	2,511	11,230	18,767	5,877	1,834	0	0
Angola .....	1,443	0	0	0	0	0	0	0	0	0
Argentina .....	12,579	0	0	0	0	0	0	0	0	0
Australia .....	11,481	0	0	160	455	69	393	0	0	0
Bahamas .....	0	0	368	0	0	0	0	0	0	0
Belgium .....	0	0	0	0	393	0	0	0	0	0
Brazil .....	0	0	0	0	0	0	0	0	0	0
Brunei .....	7,331	0	0	0	0	0	0	0	0	0
Cameroon .....	0	0	0	0	0	0	0	76	0	0
Canada .....	23,135	147	236	86	238	1,129	1,892	277	0	0
China, People's Republic of ....	4,763	0	42	600	208	262	0	0	0	0
Colombia .....	381	0	0	0	0	273	0	0	0	0
Congo (Brazzaville) .....	723	0	0	0	0	0	0	0	0	0
Ecuador .....	31,343	0	0	0	0	0	0	512	0	0
Germany, FR .....	0	0	757	0	232	0	0	0	0	0
Ivory Coast .....	0	0	292	0	0	0	0	0	0	0
Japan .....	0	0	70	0	1,484	1,461	1,745	0	0	0
Korea, Republic of .....	0	0	0	521	1,959	6,238	0	0	0	0
Malaysia .....	7,118	0	3,121	0	0	534	468	0	0	0
Mexico .....	11,795	0	0	0	0	1,241	0	308	0	0
Netherlands .....	0	0	0	0	426	0	0	0	0	0
Netherlands Antilles .....	0	0	2,177	0	0	691	0	0	0	0
Norway .....	0	0	0	0	0	0	0	311	0	0
Peru .....	4,637	0	0	0	0	0	0	350	0	0
Russia .....	0	0	0	0	0	156	44	0	0	0
Singapore .....	0	0	1,940	328	905	5,462	202	0	0	0
Thailand .....	343	0	0	0	228	294	0	0	0	0
United Kingdom .....	0	0	0	333	1,404	0	0	0	0	0
Virgin Islands, U.S. ....	0	0	361	0	1,043	558	1,133	0	0	0
Yemen .....	335	0	0	0	0	0	0	0	0	0
Other .....	7,985	0	0	483	2,255	399	0	0	0	0
<b>Total</b> .....	228,636	147	11,946	2,715	11,780	24,517	5,877	3,230	0	0
<b>Persian Gulf<sup>c</sup></b> .....	75,951	0	0	0	550	1,129	0	0	0	0

See footnotes at end of table.

**Table 25. PAD Districts IV and V—Imports of Crude Oil and Petroleum Products by Country of Origin,<sup>a</sup> 1999 (Continued)**  
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use					Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
PAD District IV										
Non OPEC .....	0	0	0	70	1,320	6,820	61,870	151	19	170
Canada .....	0	0	0	70	1,320	6,820	61,323	149	19	168
Mexico .....	0	0	0	0	0	0	547	1	0	1
Total .....	0	0	0	70	1,320	6,820	61,870	151	19	170
PAD District V										
Arab OPEC .....	0	0	0	0	10,666	13,042	88,993	208	36	244
Algeria .....	0	0	0	0	0	697	697	0	2	2
Iraq .....	0	0	0	0	0	0	48,411	133	0	133
Kuwait .....	0	0	0	0	0	640	6,823	17	2	19
Qatar .....	0	0	0	0	0	0	332	1	0	1
Saudi Arabia .....	0	0	0	0	10,666	11,705	32,730	58	32	90
Other OPEC .....	0	728	0	0	2,973	11,807	39,100	75	32	107
Indonesia .....	0	0	0	0	0	2,293	27,664	70	6	76
Nigeria .....	0	0	0	0	0	204	204	0	1	1
Venezuela .....	0	728	0	0	2,973	9,310	11,232	5	26	31
Non OPEC .....	145	0	0	0	8,484	58,359	183,751	344	160	503
Angola .....	0	0	0	0	0	0	1,443	4	0	4
Argentina .....	0	0	0	0	0	0	12,579	34	0	34
Australia .....	0	0	0	0	0	1,077	12,558	31	3	34
Bahamas .....	0	0	0	0	0	368	368	0	1	1
Belgium .....	0	0	0	0	0	393	393	0	1	1
Brazil .....	0	0	0	0	59	59	59	0	(s)	(s)
Brunei .....	0	0	0	0	0	0	7,331	20	0	20
Cameroon .....	0	0	0	0	0	76	76	0	(s)	(s)
Canada .....	0	0	0	0	7,156	11,161	34,296	63	31	94
China, People's Republic of .....	0	0	0	0	234	1,346	6,109	13	4	17
Colombia .....	0	0	0	0	0	273	654	1	1	2
Congo (Brazzaville) .....	0	0	0	0	0	0	723	2	0	2
Ecuador .....	0	0	0	0	0	512	31,855	86	1	87
Germany, FR .....	0	0	0	0	0	989	989	0	3	3
Ivory Coast .....	0	0	0	0	0	292	292	0	1	1
Japan .....	0	0	0	0	6	4,766	4,766	0	13	13
Korea, Republic of .....	145	0	0	0	907	9,770	9,770	0	27	27
Malaysia .....	0	0	0	0	0	4,123	11,241	20	11	31
Mexico .....	0	0	0	0	56	1,605	13,400	32	4	37
Netherlands .....	0	0	0	0	0	426	426	0	1	1
Netherlands Antilles .....	0	0	0	0	0	2,868	2,868	0	8	8
Norway .....	0	0	0	0	0	311	311	0	1	1
Peru .....	0	0	0	0	0	350	4,987	13	1	14
Russia .....	0	0	0	0	0	200	200	0	1	1
Singapore .....	0	0	0	0	66	8,903	8,903	0	24	24
Thailand .....	0	0	0	0	0	522	865	1	1	2
United Kingdom .....	0	0	0	0	0	1,737	1,737	0	5	5
Virgin Islands, U.S. ....	0	0	0	0	0	3,095	3,095	0	8	8
Yemen .....	0	0	0	0	0	0	335	1	0	1
Other .....	0	0	0	0	0	3,137	11,122	22	9	30
Total .....	145	728	0	0	22,123	83,208	311,844	626	228	854
Persian Gulf <sup>e</sup> .....	0	0	0	0	10,666	12,345	88,296	208	34	242

<sup>a</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>b</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

<sup>c</sup> Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

<sup>d</sup> Formerly Zaire.

<sup>e</sup> Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."



**Table 26. Imports of Residual Fuel Oil by Sulfur Content and by PAD District and State of Entry, 1999**  
(Thousand Barrels)

PAD District and State of Entry	Residual Fuel Oil			
	Less than 0.31% Sulfur	0.31 to 1.00% Sulfur	Greater than 1.00% Sulfur	Total
<b>PAD District I</b> .....	<b>14,644</b>	<b>13,039</b>	<b>39,143</b>	<b>66,826</b>
Connecticut .....	0	231	0	231
Delaware .....	0	0	2,253	2,253
Florida .....	2,109	1,210	8,752	12,071
Georgia .....	210	0	1,626	1,836
Maine .....	467	239	1,210	1,916
Maryland .....	0	1,905	1,557	3,462
Massachusetts .....	569	805	677	2,051
New Hampshire .....	0	109	712	821
New Jersey .....	6,941	3,216	7,673	17,830
New York .....	4,157	4,633	4,311	13,101
North Carolina .....	0	40	3,899	3,939
Pennsylvania .....	7	0	1,906	1,913
South Carolina .....	0	138	1,938	2,076
Vermont .....	0	13	73	86
Virginia .....	184	500	2,556	3,240
<b>PAD District II</b> .....	<b>507</b>	<b>0</b>	<b>43</b>	<b>550</b>
Michigan .....	507	0	43	550
<b>PAD District III</b> .....	<b>1,662</b>	<b>5,351</b>	<b>8,722</b>	<b>15,735</b>
Louisiana .....	1,249	208	4,026	5,483
Mississippi .....	0	0	716	716
Texas .....	413	5,143	3,980	9,536
<b>PAD District IV</b> .....	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>
Montana .....	1	1	0	2
<b>PAD District V</b> .....	<b>1,868</b>	<b>0</b>	<b>1,362</b>	<b>3,230</b>
Alaska .....	387	0	212	599
California .....	368	0	522	890
Hawaii .....	1,008	0	150	1,158
Oregon .....	105	0	399	504
Washington .....	0	0	79	79
<b>U.S. Total</b> .....	<b>18,682</b>	<b>18,391</b>	<b>49,270</b>	<b>86,343</b>

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 27. Exports of Crude Oil and Petroleum Products by PAD District, 1999**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
<b>Crude Oil<sup>a</sup></b> .....	<b>2,197</b>	<b>13,811</b>	<b>16</b>	<b>10</b>	<b>26,997</b>	<b>43,031</b>	<b>118</b>
<b>Natural Gas Liquids</b> .....	<b>675</b>	<b>4,535</b>	<b>12,048</b>	<b>23</b>	<b>1,909</b>	<b>19,191</b>	<b>53</b>
Pentanes Plus .....	18	1,024	(s)	0	1	1,043	3
Liquefied Petroleum Gases .....	658	3,510	12,048	23	1,908	18,147	50
Ethane/Ethylene .....	0	0	0	0	0	0	0
Propane/Propylene .....	408	787	9,233	11	1,545	11,984	33
Normal Butane/Butylene .....	250	2,724	2,814	12	363	6,164	17
Isobutane/Isobutylene .....	0	0	0	0	0	0	0
<b>Other Liquids</b> .....	<b>640</b>	<b>515</b>	<b>12,347</b>	<b>46</b>	<b>1,015</b>	<b>14,563</b>	<b>40</b>
Other Hydrocarbons/Oxygenates .....	604	514	8,347	46	1,004	10,515	29
Motor Gasoline Blend. Comp. ....	36	1	4,000	0	11	4,048	11
<b>Finished Petroleum Products</b> .....	<b>11,757</b>	<b>4,454</b>	<b>165,045</b>	<b>182</b>	<b>84,794</b>	<b>266,232</b>	<b>729</b>
Finished Motor Gasoline .....	490	268	37,104	10	2,469	40,342	111
Naphtha-Type Jet Fuel .....	18	1	883	0	41	943	3
Kerosene-Type Jet Fuel .....	2,018	439	5,760	0	2,539	10,756	29
Kerosene .....	107	3	112	0	57	279	1
Distillate Fuel Oil .....	2,571	357	32,948	0	23,168	59,044	162
Residual Fuel Oil .....	2,204	281	29,193	0	15,584	47,263	129
Special Naphthas .....	235	130	408	4	4,910	5,687	16
Lubricants .....	1,638	868	5,979	103	1,715	10,304	28
Waxes .....	294	295	465	50	197	1,301	4
Petroleum Coke .....	1,872	932	51,972	0	33,729	88,505	242
Asphalt and Road Oil .....	274	872	208	13	367	1,735	5
Miscellaneous Products .....	36	8	12	0	17	73	(s)
<b>Total</b> .....	<b>15,270</b>	<b>23,316</b>	<b>189,456</b>	<b>260</b>	<b>114,715</b>	<b>343,017</b>	<b>940</b>

<sup>a</sup> Crude oil exports are restricted to: (1) crude oil derived from fields under the State waters of Alaska's Cook Inlet; (2) certain domestically produced crude oil destined for Canada; and (3) shipments to U.S. territories, and California crude oil to Pacific Rim countries. On December 6, 1991, the U.S. Department of Commerce approved a license to export 25,000 barrels per day of California heavy crude oil (less than 20 degrees API gravity) to Pacific Rim countries for one year.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and the U.S. Bureau of the Census.

Table 28. Exports of Crude Oil and Petroleum Products by Destination, 1999  
(Thousand Barrels)

Destination	Crude Oil <sup>a</sup>	Pentanes Plus	Liquefied Petroleum Gases	Finished Motor Gasoline	Jet Fuel	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
Argentina .....	0	0	2	178	0	0	72	2
Australia .....	0	0	4	3	0	0	8	0
Bahamas .....	0	0	127	59	1	(s)	1,087	520
Bahrain .....	0	0	0	0	0	0	(s)	0
Belgium & Luxembourg .....	0	0	8	1	0	0	16	4
Brazil .....	0	0	743	(s)	100	0	1,957	0
Cameroon .....	0	0	0	(s)	0	0	0	0
Canada .....	15,227	1,038	3,997	1,388	4,977	105	4,113	2,907
Chile .....	0	0	82	488	0	0	367	243
China, People's Republic of .....	3,350	0	0	0	(s)	0	2,528	1,122
China, Taiwan .....	560	0	24	3	1	4	1,016	388
Colombia .....	0	0	41	220	0	0	6	1
Costa Rica .....	0	0	1	240	12	0	381	1,065
Denmark .....	0	0	0	0	0	0	(s)	1
Dominican Republic .....	0	0	315	72	0	1	621	324
Ecuador .....	0	0	167	660	220	(s)	39	0
Egypt .....	0	0	0	0	0	0	3	13
El Salvador .....	0	0	101	0	0	0	622	1
Finland .....	0	0	0	0	0	2	11	0
France .....	0	0	97	(s)	10	0	281	302
French Pacific Islands .....	0	0	0	(s)	0	(s)	368	0
Germany, FR .....	0	(s)	406	(s)	0	0	7	3
Ghana .....	0	0	0	0	0	0	0	0
Greece .....	0	0	(s)	0	0	0	5	0
Guatemala .....	0	0	429	1,030	62	6	1,373	6
Guinea .....	0	0	0	0	1	0	1	0
Honduras .....	0	(s)	30	438	152	0	1,562	344
Hong Kong .....	2	(s)	(s)	1	0	1	10	0
India .....	0	0	83	0	0	0	18	365
Indonesia .....	0	0	(s)	0	0	0	11	0
Ireland .....	0	0	0	0	0	0	298	255
Israel .....	0	0	1	0	2,827	0	254	0
Italy .....	0	(s)	217	0	0	0	8	0
Jamaica .....	0	0	89	101	20	0	81	8,325
Japan .....	10,428	0	626	5	0	8	361	649
Korea, Republic of .....	13,456	0	447	(s)	0	1	37	978
Malaysia .....	0	1	(s)	0	0	(s)	12	0
Mexico .....	10	(s)	8,987	33,969	1,206	35	21,059	16,558
Netherlands .....	0	0	0	299	950	93	3,030	2,226
Netherlands Antilles .....	0	0	(s)	246	(s)	(s)	2,251	572
New Zealand .....	0	(s)	(s)	0	(s)	0	1	0
Nigeria .....	0	0	1	0	0	0	236	0
Norway .....	0	0	24	0	0	0	1	5
Panama .....	0	0	24	110	80	1	2,204	2,235
Peru .....	0	0	206	(s)	9	1	303	0
Philippines .....	0	0	(s)	0	0	0	2	0
Poland .....	0	(s)	(s)	0	0	0	(s)	0
Portugal .....	0	0	0	0	0	0	0	0
Puerto Rico .....	0	0	47	485	1	3	2,212	1
Russia .....	0	0	(s)	57	0	0	13	(s)
Saudi Arabia .....	0	0	(s)	0	4	0	2	0
Singapore .....	0	0	0	0	0	0	8,251	7,692
South Africa .....	0	0	1	0	(s)	0	7	0
Spain .....	0	0	2	0	0	0	1,106	128
Suriname .....	0	0	0	0	0	0	1	0
Sweden .....	0	1	0	2	0	0	12	0
Switzerland .....	0	0	1	(s)	0	(s)	1	0
Thailand .....	0	0	(s)	0	0	2	1	1
Trinidad and Tobago .....	0	0	0	(s)	0	0	6	0
Turkey .....	0	0	668	0	0	(s)	8	0
United Arab Emirates .....	0	0	(s)	0	0	(s)	1	4
United Kingdom .....	0	1	54	2	981	12	181	8
Uruguay .....	0	0	0	0	0	0	3	0
Venezuela .....	0	0	1	0	(s)	(s)	239	0
Virgin Islands, U.S. ....	0	0	0	0	(s)	0	1	0
Yugoslavia .....	0	0	0	0	0	0	1	1
Other .....	0	0	93	285	82	1	379	15
Total .....	43,031	1,043	18,147	40,342	11,699	279	59,044	47,263

See footnotes at end of table.



**Table 28. Exports of Crude Oil and Petroleum Products by Destination, 1999 (Continued)**  
(Thousand Barrels)

Destination	Special Naphthas	Lubricants	Waxes	Petroleum Coke	Asphalt and Road Oil	Other Products <sup>b</sup>	Crude Oil and Products	
							Total	Daily Average
Argentina .....	9	66	5	28	1	7	369	1
Australia .....	2	38	6	3,641	6	2	3,710	10
Bahamas .....	(s)	41	(s)	0	5	1	1,842	5
Bahrain .....	(s)	1	0	98	(s)	0	99	(s)
Belgium & Luxembourg .....	(s)	80	6	3,644	3	428	4,190	11
Brazil .....	7	80	8	6,740	15	70	9,721	27
Cameroon .....	0	1	0	251	0	0	252	1
Canada .....	207	1,810	664	4,991	1,129	804	43,358	119
Chile .....	3	272	4	488	1	57	2,005	5
China, People's Republic of .....	12	53	3	(s)	2	6	7,077	19
China, Taiwan .....	306	639	5	211	2	28	3,187	9
Colombia .....	38	191	5	229	5	3	739	2
Costa Rica .....	13	174	4	0	40	1	1,932	5
Denmark .....	(s)	2	1	1,249	(s)	(s)	1,253	3
Dominican Republic .....	4	298	2	45	6	(s)	1,690	5
Ecuador .....	425	34	(s)	0	0	(s)	1,546	4
Egypt .....	1	47	0	0	2	(s)	66	(s)
El Salvador .....	1	54	2	0	0	(s)	780	2
Finland .....	1	3	0	0	1	0	19	(s)
France .....	3	20	21	1,912	5	17	2,667	7
French Pacific Islands .....	(s)	1	(s)	0	0	0	370	1
Germany, FR .....	3	20	31	618	31	23	1,143	3
Ghana .....	0	4	0	397	(s)	4	404	1
Greece .....	0	17	(s)	1,045	0	(s)	1,066	3
Guatemala .....	13	176	6	0	0	30	3,131	9
Guinea .....	0	16	0	0	0	0	18	(s)
Honduras .....	13	103	1	0	0	(s)	2,645	7
Hong Kong .....	12	80	8	0	1	6	122	(s)
India .....	(s)	269	7	407	11	42	1,202	3
Indonesia .....	(s)	13	1	184	1	174	384	1
Ireland .....	0	1	(s)	301	0	2	857	2
Israel .....	(s)	39	(s)	1,547	0	6	4,674	13
Italy .....	(s)	158	3	8,444	4	116	8,950	25
Jamaica .....	10	82	2	0	0	222	8,932	24
Japan .....	3,272	480	35	14,367	15	566	30,810	84
Korea, Republic of .....	1,089	81	7	1,305	8	327	17,735	49
Malaysia .....	1	23	1	5	1	2	46	(s)
Mexico .....	29	1,623	415	3,735	310	7,435	95,372	261
Netherlands .....	6	23	4	6,675	18	509	13,834	38
Netherlands Antilles .....	0	1,299	(s)	0	0	0	4,369	12
New Zealand .....	(s)	13	(s)	717	1	2	735	2
Nigeria .....	(s)	152	0	0	(s)	0	390	1
Norway .....	0	3	(s)	986	(s)	(s)	1,019	3
Panama .....	1	376	1	20	0	425	5,476	15
Peru .....	(s)	45	2	2	1	(s)	570	2
Philippines .....	2	27	5	143	(s)	(s)	181	(s)
Poland .....	(s)	(s)	0	0	0	0	1	(s)
Portugal .....	(s)	1	0	1,510	(s)	(s)	1,511	4
Puerto Rico .....	123	218	2	(s)	2	3	3,098	8
Russia .....	0	21	(s)	6	0	0	97	(s)
Saudi Arabia .....	(s)	24	1	144	(s)	(s)	175	(s)
Singapore .....	4	205	2	26	30	113	16,323	45
South Africa .....	2	146	(s)	1,133	1	5	1,296	4
Spain .....	(s)	4	2	8,131	4	(s)	9,376	26
Suriname .....	0	7	0	0	(s)	0	8	(s)
Sweden .....	0	10	1	204	0	8	237	1
Switzerland .....	12	4	2	23	(s)	43	85	(s)
Thailand .....	1	36	1	1,467	(s)	3	1,513	4
Trinidad and Tobago .....	3	154	1	2	(s)	19	186	1
Turkey .....	(s)	50	(s)	4,064	13	3	4,807	13
United Arab Emirates .....	1	57	0	1,242	2	0	1,307	4
United Kingdom .....	6	55	9	1,888	30	42	3,270	9
Uruguay .....	0	11	(s)	1	(s)	(s)	15	(s)
Venezuela .....	2	38	10	1,333	12	2,838	4,473	12
Virgin Islands, U.S. ....	0	2	0	0	0	0	3	(s)
Yugoslavia .....	0	4	(s)	0	0	0	6	(s)
Other .....	44	227	4	2,909	12	242	4,293	12
<b>Total .....</b>	<b>5,687</b>	<b>10,304</b>	<b>1,301</b>	<b>88,505</b>	<b>1,735</b>	<b>14,636</b>	<b>343,017</b>	<b>940</b>

<sup>a</sup> Crude oil exports are restricted to: (1) crude oil derived from fields under the State waters of Alaska's Cook Inlet; (2) certain domestically produced crude oil destined for Canada; and (3) shipments to U.S. territories, and California crude oil to Pacific Rim countries. On December 6, 1991, the U.S. Department of Commerce approved a license to export 25,000 barrels per day of California heavy crude oil (less than 20 degrees API gravity) to Pacific Rim countries for one year.

<sup>b</sup> Includes miscellaneous products, motor gasoline blending components, and other hydrocarbons and oxygenates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and the U.S. Bureau of the Census.

**Table 29. Net Imports of Crude Oil and Petroleum Products into the United States by Country, 1999**  
(Thousand Barrels per Day)

Country	Crude Oil <sup>a</sup>	Liquefied Petroleum Gases	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Petroleum Coke	Lubricants	Other Products <sup>b</sup>	Total Products	Total Crude Oil and Products
<b>Arab OPEC</b> .....	<b>2,385</b>	<b>12</b>	<b>41</b>	<b>3</b>	<b>9</b>	<b>40</b>	<b>-4</b>	<b>(s)</b>	<b>231</b>	<b>333</b>	<b>2,718</b>
Algeria .....	25	12	1	0	2	40	0	(s)	177	233	259
Iraq .....	725	0	0	0	0	0	0	0	0	0	725
Kuwait .....	246	(s)	0	2	(s)	0	(s)	(s)	(s)	2	248
Qatar .....	1	0	(s)	0	0	0	0	(s)	8	9	10
Saudi Arabia .....	1,387	(s)	40	2	6	(s)	(s)	(s)	43	91	1,478
United Arab Emirates .....	0	(s)	0	0	(s)	(s)	-3	(s)	2	-1	-1
<b>Other OPEC</b> .....	<b>1,843</b>	<b>9</b>	<b>64</b>	<b>31</b>	<b>56</b>	<b>52</b>	<b>-4</b>	<b>-1</b>	<b>167</b>	<b>373</b>	<b>2,216</b>
Indonesia .....	70	(s)	0	0	(s)	5	-1	(s)	6	11	80
Nigeria .....	623	1	(s)	0	2	3	0	(s)	27	32	655
Venezuela .....	1,150	8	64	31	54	43	-4	(s)	134	330	1,480
<b>Non OPEC</b> .....	<b>4,384</b>	<b>111</b>	<b>165</b>	<b>62</b>	<b>24</b>	<b>15</b>	<b>-234</b>	<b>-17</b>	<b>466</b>	<b>594</b>	<b>4,978</b>
Angola .....	357	0	0	2	0	0	0	(s)	2	4	360
Argentina .....	89	(s)	7	0	(s)	1	(s)	(s)	15	22	111
Australia .....	31	(s)	1	(s)	1	0	-10	(s)	8	(s)	32
Bahamas .....	0	(s)	1	(s)	-3	(s)	0	(s)	1	-2	-2
Belgium & Luxembourg .....	0	(s)	5	0	(s)	(s)	-10	(s)	27	23	23
Benin .....	1	0	0	0	0	0	0	0	0	0	1
Brazil .....	0	-2	7	(s)	-5	2	-18	(s)	16	-1	-1
Brunei .....	46	0	0	0	(s)	0	0	0	0	(s)	46
Cameroon .....	4	0	(s)	0	0	(s)	-1	(s)	1	(s)	4
Canada .....	1,136	140	53	-9	66	11	-13	-1	38	284	1,421
China, People's Republic of .....	4	0	2	1	-7	-3	(s)	(s)	6	-2	2
China, Taiwan .....	-2	(s)	(s)	(s)	-3	-1	-1	-2	-1	-7	-9
Colombia .....	452	(s)	-1	2	(s)	6	-1	-1	8	14	466
Congo (Brazzaville) .....	46	0	0	0	0	0	0	(s)	0	(s)	46
Congo (Kinshasa) <sup>c</sup> .....	2	0	0	0	0	0	0	(s)	0	(s)	2
Ecuador .....	114	(s)	-2	-1	(s)	2	0	(s)	1	(s)	114
Egypt .....	22	0	0	0	(s)	(s)	0	(s)	1	1	24
France .....	0	(s)	4	(s)	-1	-1	-5	(s)	19	16	16
Gabon .....	168	0	0	0	0	0	0	0	(s)	(s)	168
Germany, FR .....	0	-1	2	0	(s)	10	-2	(s)	11	20	20
Greece .....	0	(s)	0	0	(s)	0	-3	(s)	2	(s)	(s)
Guatemala .....	21	-1	-3	(s)	-4	(s)	0	(s)	1	-8	13
India .....	0	(s)	0	0	(s)	-1	-1	(s)	(s)	-3	-3
Italy .....	0	-1	2	0	(s)	0	-23	(s)	7	-15	-15
Jamaica .....	0	(s)	(s)	(s)	(s)	-23	0	(s)	-1	-24	-24
Japan .....	-29	-2	4	4	4	-2	-39	-1	-10	-42	-71
Korea, Republic of .....	-37	-1	5	18	(s)	-3	-4	(s)	3	18	-19
Malaysia .....	21	(s)	0	1	1	0	(s)	(s)	11	13	35
Mexico .....	1,254	-25	-93	1	-58	-32	-10	-4	30	-191	1,063
Netherlands .....	0	0	7	-3	-8	-4	-18	(s)	15	-11	-11
Netherlands Antilles .....	0	(s)	-1	13	-5	10	0	-4	38	53	53
Norway .....	263	6	5	0	(s)	1	-3	(s)	28	37	301
Oman .....	0	0	0	0	0	0	(s)	(s)	(s)	(s)	(s)
Panama .....	0	(s)	(s)	(s)	-6	-6	(s)	-1	-1	-15	-15
Peru .....	25	-1	(s)	(s)	-1	4	(s)	(s)	1	4	29
Puerto Rico .....	0	(s)	-1	(s)	-6	(s)	(s)	6	5	4	4
Romania .....	0	0	1	0	(s)	0	0	(s)	4	5	5
Russia .....	21	(s)	1	(s)	15	12	(s)	(s)	39	68	89
Syria .....	2	0	0	0	0	1	0	(s)	(s)	1	3
Spain .....	0	(s)	2	0	-3	(s)	-22	(s)	8	-15	-15
Sweden .....	0	0	(s)	0	(s)	1	-1	(s)	4	5	5
Thailand .....	1	(s)	1	1	(s)	(s)	-4	(s)	(s)	-2	-1
Trinidad and Tobago .....	40	0	(s)	0	2	7	(s)	(s)	8	17	58
Turkey .....	0	-2	0	0	(s)	0	-11	(s)	2	-11	-11
United Kingdom .....	284	3	12	-3	2	7	-5	(s)	56	71	356
Virgin Islands, U.S. ....	1	0	123	27	76	39	0	(s)	13	278	280
Yemen .....	1	0	0	0	0	0	0	0	1	1	2
Other .....	43	-2	21	8	-34	-25	-29	-5	47	-18	26
<b>Total</b> .....	<b>8,613</b>	<b>132</b>	<b>271</b>	<b>96</b>	<b>89</b>	<b>107</b>	<b>-242</b>	<b>-17</b>	<b>864</b>	<b>1,300</b>	<b>9,912</b>
<b>Persian Gulf <sup>d</sup></b> .....	<b>2,360</b>	<b>(s)</b>	<b>40</b>	<b>3</b>	<b>6</b>	<b>(s)</b>	<b>-4</b>	<b>(s)</b>	<b>54</b>	<b>100</b>	<b>2,459</b>

<sup>a</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

<sup>b</sup> Includes asphalt and road oil, aviation gasoline, aviation gasoline blending components, kerosene, miscellaneous products, motor gasoline blending components, naphtha for petrochemical feedstock use, other hydrocarbons and oxygenates, other oils for petrochemical feedstock use, pentanes plus, special naphthas, unfinished oils, and waxes.

<sup>c</sup> Formerly Zaire.

<sup>d</sup> Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," and the U.S. Bureau of the Census.



**Table 30. Stocks of Crude Oil and Petroleum Products by PAD District, 1999**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
<b>Crude Oil</b> .....	<b>12,037</b>	<b>61,624</b>	<b>708,652</b>	<b>12,964</b>	<b>56,446</b>	<b>851,723</b>
Refinery .....	11,340	15,164	45,068	2,316	19,136	93,024
Tank Farms and Pipelines .....	676	45,604	82,957	9,866	29,542	168,645
Leases .....	21	856	13,386	782	661	15,706
Strategic Petroleum Reserve <sup>a</sup> .....	0	0	567,241	0	0	567,241
Alaskan In Transit .....	0	0	0	0	7,107	7,107
<b>Total Stocks, All Oils (excluding Crude Oil)</b> .....	<b>150,668</b>	<b>149,040</b>	<b>236,654</b>	<b>16,724</b>	<b>88,122</b>	<b>641,208</b>
Refinery .....	47,375	50,584	127,018	10,349	57,875	293,201
Bulk Terminal .....	75,655	58,841	63,417	2,522	22,154	222,589
Pipeline .....	27,595	38,266	43,463	3,549	7,898	120,771
Natural Gas Processing Plant .....	43	1,349	2,756	304	195	4,647
<b>Pentanes Plus</b> .....	<b>20</b>	<b>1,159</b>	<b>3,864</b>	<b>308</b>	<b>31</b>	<b>5,382</b>
Refinery .....	0	242	182	21	0	445
Bulk Terminal .....	11	522	2,106	2	12	2,653
Pipeline .....	0	297	1,088	142	0	1,527
Natural Gas Processing Plant .....	9	98	488	143	19	757
<b>Liquefied Petroleum Gases</b> .....	<b>6,792</b>	<b>29,809</b>	<b>48,147</b>	<b>1,592</b>	<b>2,999</b>	<b>89,339</b>
Refinery .....	1,820	3,238	7,696	354	1,135	14,243
Bulk Terminal .....	2,355	18,194	28,427	57	1,688	50,721
Pipeline .....	2,583	7,126	9,756	1,020	0	20,485
Natural Gas Processing Plant .....	34	1,251	2,268	161	176	3,890
<b>Ethane/Ethylene</b> .....	<b>0</b>	<b>4,434</b>	<b>15,965</b>	<b>457</b>	<b>0</b>	<b>20,856</b>
Refinery .....	0	2	650	0	0	652
Bulk Terminal .....	0	2,342	11,777	0	0	14,119
Pipeline .....	0	1,766	2,910	455	0	5,131
Natural Gas Processing Plant .....	0	324	628	2	0	954
<b>Propane/Propylene</b> .....	<b>5,072</b>	<b>18,550</b>	<b>17,484</b>	<b>561</b>	<b>1,359</b>	<b>43,026</b>
Refinery .....	644	1,495	2,096	101	100	4,436
Bulk Terminal .....	1,923	12,618	9,933	55	1,126	25,655
Pipeline .....	2,481	3,727	4,694	324	0	11,226
Natural Gas Processing Plant .....	24	710	761	81	133	1,709
<b>Normal Butane/Butylene</b> .....	<b>1,526</b>	<b>5,210</b>	<b>10,898</b>	<b>332</b>	<b>1,306</b>	<b>19,272</b>
Refinery .....	985	1,244	3,813	114	761	6,917
Bulk Terminal .....	432	2,561	5,085	2	530	8,610
Pipeline .....	102	1,280	1,536	154	0	3,072
Natural Gas Processing Plant .....	7	125	464	62	15	673
<b>Isobutane/Isobutylene</b> .....	<b>194</b>	<b>1,615</b>	<b>3,800</b>	<b>242</b>	<b>334</b>	<b>6,185</b>
Refinery .....	191	497	1,137	139	274	2,238
Bulk Terminal .....	0	673	1,632	0	32	2,337
Pipeline .....	0	353	616	87	0	1,056
Natural Gas Processing Plant .....	3	92	415	16	28	554
<b>Other Hydrocarbons/Hydrogen/Oxygenates</b> .....	<b>2,051</b>	<b>2,268</b>	<b>5,928</b>	<b>191</b>	<b>3,201</b>	<b>13,639</b>
Refinery .....	1,678	481	2,361	71	1,977	6,568
Bulk Terminal .....	373	1,760	3,462	110	423	6,128
Pipeline .....	0	27	105	10	801	943
<b>Other Hydrocarbons/Hydrogen</b> .....	<b>0</b>	<b>26</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>30</b>
Refinery .....	0	26	1	0	3	30
<b>Fuel Ethanol</b> .....	<b>241</b>	<b>2,151</b>	<b>1,049</b>	<b>126</b>	<b>457</b>	<b>4,024</b>
Refinery .....	W	391	W	W	W	578
Bulk Terminal <sup>b</sup> .....	W	W	W	W	W	W
Pipeline .....	W	W	W	W	W	W
<b>ETBE</b> .....	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>
Refinery .....	W	W	W	W	W	W
Bulk Terminal <sup>b</sup> .....	W	W	W	W	W	W
Pipeline .....	W	W	W	W	W	W
<b>Methanol</b> .....	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>905</b>
Refinery .....	W	W	W	W	W	905

See footnotes at end of table.



**Table 30. Stocks of Crude Oil and Petroleum Products by PAD District, 1999 (Continued)**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
<b>MTBE</b> .....	<b>1,522</b>	<b>W</b>	<b>3,723</b>	<b>W</b>	<b>2,732</b>	<b>8,094</b>
Refinery .....	1,349	W	1,655	W	1,909	4,940
Bulk Terminal <sup>b</sup> .....	W	W	1,963	W	59	2,258
Pipeline .....	W	W	105	W	764	896
<b>Other Oxygenates <sup>c</sup></b> .....	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>
Refinery .....	W	W	W	W	W	W
Bulk Terminal <sup>b</sup> .....	W	W	W	W	W	W
Pipeline .....	W	W	W	W	W	W
<b>Unfinished Oils</b> .....	<b>9,360</b>	<b>11,082</b>	<b>44,341</b>	<b>1,917</b>	<b>19,554</b>	<b>86,254</b>
Refinery .....						
Naphthas and Lighter .....	1,850	3,207	10,807	510	3,295	19,669
Kerosene and Light Gas Oils .....	2,093	1,888	8,045	265	4,807	17,098
Heavy Gas Oils .....	3,996	3,348	17,552	819	8,749	34,464
Residuum .....	1,421	2,639	7,937	323	2,703	15,023
<b>Motor Gasoline Blending Components</b> .....	<b>5,715</b>	<b>10,129</b>	<b>13,381</b>	<b>1,941</b>	<b>8,068</b>	<b>39,234</b>
Refinery .....	5,453	7,930	11,858	1,941	6,778	33,960
Bulk Terminal .....	187	554	1,063	0	642	2,446
Pipeline .....	75	1,645	460	0	648	2,828
<b>Aviation Gasoline Blending Components</b> .....	<b>143</b>	<b>22</b>	<b>54</b>	<b>0</b>	<b>2</b>	<b>221</b>
Refinery .....	143	22	54	0	2	221
<b>Finished Motor Gasoline</b> .....	<b>46,009</b>	<b>38,351</b>	<b>43,690</b>	<b>4,814</b>	<b>21,229</b>	<b>154,093</b>
Refinery .....	8,273	7,245	17,129	2,438	9,362	44,447
Bulk Terminal .....	24,122	16,724	9,530	1,125	8,856	60,357
Pipeline .....	13,614	14,382	17,031	1,251	3,011	49,289
<b>Reformulated</b> .....	<b>18,045</b>	<b>1,448</b>	<b>10,059</b>	<b>0</b>	<b>11,885</b>	<b>41,437</b>
Refinery .....	5,002	113	4,245	0	5,036	14,396
Bulk Terminal .....	8,155	1,179	2,420	0	4,965	16,719
Pipeline .....	4,888	156	3,394	0	1,884	10,322
<b>Oxygenated</b> .....	<b>78</b>	<b>499</b>	<b>47</b>	<b>234</b>	<b>46</b>	<b>904</b>
Refinery .....	14	200	0	81	46	341
Bulk Terminal .....	64	209	0	153	0	426
Pipeline .....	0	90	47	0	0	137
<b>Other</b> .....	<b>27,886</b>	<b>36,404</b>	<b>33,584</b>	<b>4,580</b>	<b>9,298</b>	<b>111,752</b>
Refinery .....	3,257	6,932	12,884	2,357	4,280	29,710
Bulk Terminal .....	15,903	15,336	7,110	972	3,891	43,212
Pipeline .....	8,726	14,136	13,590	1,251	1,127	38,830
<b>Finished Aviation Gasoline</b> .....	<b>154</b>	<b>394</b>	<b>517</b>	<b>24</b>	<b>505</b>	<b>1,594</b>
Refinery .....	46	134	474	20	338	1,012
Bulk Terminal .....	108	235	43	4	167	557
Pipeline .....	0	25	0	0	0	25
<b>Naphtha-Type Jet Fuel</b> .....	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>43</b>	<b>54</b>
Refinery .....	0	0	2	0	39	41
Bulk Terminal .....	0	0	9	0	4	13
Pipeline .....	0	0	0	0	0	0
<b>Kerosene-Type Jet Fuel</b> .....	<b>9,617</b>	<b>8,460</b>	<b>12,588</b>	<b>678</b>	<b>9,104</b>	<b>40,447</b>
Refinery .....	1,498	2,848	5,719	301	4,702	15,068
Bulk Terminal .....	3,729	1,722	1,626	216	2,920	10,213
Pipeline .....	4,390	3,890	5,243	161	1,482	15,166

See footnotes at end of table.

**Table 30. Stocks of Crude Oil and Petroleum Products by PAD District, 1999 (Continued)**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
<b>Kerosene</b> .....	<b>2,296</b>	<b>1,230</b>	<b>1,121</b>	<b>119</b>	<b>105</b>	<b>4,871</b>
Refinery .....	245	334	478	69	74	1,200
Bulk Terminal .....	1,820	855	260	0	19	2,954
Pipeline .....	231	41	383	50	12	717
<b>Distillate Fuel Oil</b> .....	<b>48,464</b>	<b>32,091</b>	<b>29,546</b>	<b>3,262</b>	<b>12,100</b>	<b>125,463</b>
Refinery .....	11,065	8,255	14,470	1,495	5,587	40,872
Bulk Terminal .....	30,697	13,005	5,691	859	4,706	54,958
Pipeline .....	6,702	10,831	9,385	908	1,807	29,633
<b>0.05 Percent Sulfur and Under</b> .....	<b>16,063</b>	<b>22,874</b>	<b>18,396</b>	<b>2,814</b>	<b>9,163</b>	<b>69,310</b>
Refinery .....	2,633	5,001	8,716	1,174	4,016	21,540
Bulk Terminal .....	10,358	9,645	3,988	770	3,402	28,163
Pipeline .....	3,072	8,228	5,692	870	1,745	19,607
<b>Greater than 0.05 Percent Sulfur</b> .....	<b>32,401</b>	<b>9,217</b>	<b>11,150</b>	<b>448</b>	<b>2,937</b>	<b>56,153</b>
Refinery .....	8,432	3,254	5,754	321	1,571	19,332
Bulk Terminal .....	20,339	3,360	1,703	89	1,304	26,795
Pipeline .....	3,630	2,603	3,693	38	62	10,026
<b>Residual Fuel Oil<sup>d</sup></b> .....	<b>14,066</b>	<b>1,660</b>	<b>14,663</b>	<b>390</b>	<b>5,051</b>	<b>35,830</b>
Refinery .....	4,631	1,294	6,041	390	3,287	15,643
Bulk Terminal .....	9,435	366	8,622	0	1,627	20,050
Pipeline .....	0	0	0	0	137	137
<b>Less than 0.31% Sulfur</b> .....	<b>2,601</b>	<b>128</b>	<b>1,491</b>	<b>17</b>	<b>632</b>	<b>4,869</b>
Refinery .....	951	0	54	17	632	1,654
Bulk Terminal .....	1,650	128	1,437	0	0	3,215
<b>0.31 to 1.00% Sulfur</b> .....	<b>6,076</b>	<b>242</b>	<b>2,777</b>	<b>172</b>	<b>1,156</b>	<b>10,423</b>
Refinery .....	2,094	153	536	172	993	3,948
Bulk Terminal .....	3,982	89	2,241	0	163	6,475
<b>Greater than 1.00% Sulfur</b> .....	<b>5,389</b>	<b>1,290</b>	<b>10,395</b>	<b>201</b>	<b>3,126</b>	<b>20,401</b>
Refinery .....	1,586	1,141	5,451	201	1,662	10,041
Bulk Terminal .....	3,803	149	4,944	0	1,464	10,360
<b>Naphtha for Petrochemical Feedstock Use</b> .....	<b>610</b>	<b>309</b>	<b>1,178</b>	<b>0</b>	<b>167</b>	<b>2,264</b>
Refinery .....	610	309	1,178	0	167	2,264
<b>Other Oils for Petrochemical Feedstock Use</b> .....	<b>0</b>	<b>72</b>	<b>1,447</b>	<b>0</b>	<b>168</b>	<b>1,687</b>
Refinery .....	0	72	1,447	0	168	1,687
<b>Special Naphthas</b> .....	<b>81</b>	<b>362</b>	<b>1,868</b>	<b>6</b>	<b>34</b>	<b>2,351</b>
Refinery .....	63	355	1,664	6	34	2,122
Bulk Terminal .....	18	7	204	0	0	229
<b>Lubricants</b> .....	<b>2,064</b>	<b>1,881</b>	<b>5,984</b>	<b>0</b>	<b>1,889</b>	<b>11,818</b>
Refinery .....	640	465	4,702	0	1,197	7,004
Bulk Terminal .....	1,424	1,416	1,282	0	692	4,814
<b>Waxes</b> .....	<b>246</b>	<b>68</b>	<b>406</b>	<b>22</b>	<b>235</b>	<b>977</b>
Refinery .....	246	68	406	22	235	977
<b>Petroleum Coke</b> .....	<b>266</b>	<b>1,953</b>	<b>3,283</b>	<b>71</b>	<b>1,551</b>	<b>7,124</b>
Refinery .....	266	1,953	3,283	71	1,551	7,124
<b>Asphalt and Road Oil</b> .....	<b>2,641</b>	<b>7,536</b>	<b>3,429</b>	<b>1,374</b>	<b>1,878</b>	<b>16,858</b>
Refinery .....	1,292	4,177	2,843	1,233	1,522	11,067
Bulk Terminal .....	1,349	3,359	586	141	356	5,791
<b>Miscellaneous Products</b> .....	<b>73</b>	<b>204</b>	<b>1,208</b>	<b>15</b>	<b>208</b>	<b>1,708</b>
Refinery .....	46	80	690	0	166	982
Bulk Terminal .....	27	122	506	8	42	705
Pipeline .....	0	2	12	7	0	21
<b>Total Stocks, All Oils</b> .....	<b>162,705</b>	<b>210,664</b>	<b>945,306</b>	<b>29,688</b>	<b>144,568</b>	<b>1,492,931</b>

<sup>a</sup> Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

<sup>b</sup> Includes stocks held by producers.

<sup>c</sup> Includes tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers Intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

<sup>d</sup> Sulfur content not available for stocks held by pipelines.

W = Withheld to avoid disclosure of individual company data.

Note: Stocks are reported as of the end of December.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," and EIA-816, "Monthly Natural Gas Liquids Report."



**Table 31. Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products by PAD District and State, 1999**  
(Thousand Barrels)

PAD District and State	Motor Gasoline				Kerosene	Distillate Fuel Oil			Residual Fuel	Propane/Propylene
	Total	Reformulated	Oxygenated	Other		Total	0.05% Sulfur and Under	Greater than 0.05% Sulfur		
<b>PAD District I</b> .....	<b>32,395</b>	<b>13,157</b>	<b>78</b>	<b>19,160</b>	<b>2,065</b>	<b>41,762</b>	<b>12,991</b>	<b>28,771</b>	<b>14,066</b>	<b>2,591</b>
Connecticut .....	683	683	0	0	51	3,487	483	3,004	133	W
Delaware, D.C., Maryland .....	1,849	1,484	0	365	99	2,712	1,018	1,694	2,814	W
Florida .....	4,830	0	0	4,830	45	1,833	1,152	681	870	29
Georgia .....	1,804	14	0	1,790	19	1,194	804	390	271	W
Maine, New Hampshire, Vermont .....	1,084	366	0	718	157	1,643	380	1,263	474	W
Massachusetts .....	1,389	1,389	0	0	133	3,221	449	2,772	839	W
New Jersey .....	5,827	4,535	0	1,292	179	12,239	1,930	10,309	4,251	W
New York .....	3,353	1,250	64	2,039	321	4,953	1,477	3,476	1,981	W
North Carolina .....	2,179	16	0	2,163	119	1,496	840	656	370	W
Pennsylvania .....	4,936	1,328	0	3,608	693	5,372	2,479	2,893	1,031	W
Rhode Island .....	467	467	0	0	W	849	126	723	W	W
South Carolina .....	1,238	28	0	1,210	123	861	527	334	W	W
Virginia .....	2,525	1,597	0	928	104	1,769	1,214	555	473	W
West Virginia .....	231	0	14	217	W	133	112	21	W	W
<b>PAD District II</b> .....	<b>23,969</b>	<b>1,292</b>	<b>409</b>	<b>22,268</b>	<b>1,189</b>	<b>21,260</b>	<b>14,646</b>	<b>6,614</b>	<b>1,660</b>	<b>14,823</b>
Illinois .....	2,906	589	0	2,317	123	3,589	2,565	1,024	633	601
Indiana .....	3,257	59	9	3,189	483	3,061	1,686	1,375	120	W
Iowa .....	1,040	0	0	1,040	W	1,147	892	255	W	W
Kansas, Nebraska .....	2,100	52	0	2,048	5	1,838	1,544	294	57	9,376
Kentucky .....	1,338	252	0	1,086	42	927	496	431	W	W
Michigan .....	2,245	0	0	2,245	113	1,439	1,142	297	46	2,642
Minnesota .....	1,501	0	200	1,301	W	1,389	1,031	358	78	W
Missouri .....	1,082	213	0	869	W	689	520	169	W	W
North Dakota, South Dakota .....	606	0	1	605	W	829	548	281	W	W
Ohio .....	3,218	0	0	3,218	296	2,066	1,273	793	201	W
Oklahoma .....	1,547	0	3	1,544	W	1,378	1,030	348	100	559
Tennessee .....	1,699	0	47	1,652	19	1,204	782	422	155	W
Wisconsin .....	1,430	127	149	1,154	W	1,704	1,137	567	72	W
<b>PAD District III</b> .....	<b>26,659</b>	<b>6,665</b>	<b>0</b>	<b>19,994</b>	<b>738</b>	<b>20,161</b>	<b>12,704</b>	<b>7,457</b>	<b>14,663</b>	<b>12,790</b>
Alabama .....	1,033	16	0	1,017	53	851	510	341	130	46
Arkansas .....	640	0	0	640	W	478	305	173	W	W
Louisiana .....	6,227	246	0	5,981	363	5,159	2,379	2,780	5,302	1,882
Mississippi .....	1,932	0	0	1,932	1	1,354	691	663	W	2,724
New Mexico .....	317	0	0	317	W	277	225	52	11	W
Texas .....	16,510	6,403	0	10,107	311	12,042	8,594	3,448	8,993	8,079
<b>PAD District IV</b> .....	<b>3,563</b>	<b>0</b>	<b>234</b>	<b>3,329</b>	<b>69</b>	<b>2,354</b>	<b>1,944</b>	<b>410</b>	<b>390</b>	<b>237</b>
Colorado .....	760	0	234	526	W	550	493	57	W	W
Idaho .....	394	0	0	394	W	385	296	89	W	W
Montana .....	960	0	0	960	W	550	550	0	87	34
Utah .....	555	0	0	555	W	467	259	208	69	132
Wyoming .....	894	0	0	894	W	402	346	56	W	39
<b>PAD District V</b> .....	<b>18,218</b>	<b>10,001</b>	<b>46</b>	<b>8,171</b>	<b>93</b>	<b>10,293</b>	<b>7,418</b>	<b>2,875</b>	<b>4,914</b>	<b>1,359</b>
Alaska .....	426	0	0	426	W	803	8	795	W	W
Arizona .....	1,219	171	0	1,048	W	500	478	22	W	W
California .....	10,627	9,830	46	751	86	5,308	4,858	450	3,009	675
Hawaii .....	817	0	0	817	W	431	107	324	W	W
Nevada .....	298	0	0	298	W	124	115	9	W	W
Oregon .....	1,120	0	0	1,120	W	804	603	201	249	W
Washington .....	3,711	0	0	3,711	W	2,323	1,249	1,074	783	111
<b>U.S. Total</b> .....	<b>104,804</b>	<b>31,115</b>	<b>767</b>	<b>72,922</b>	<b>4,154</b>	<b>95,830</b>	<b>49,703</b>	<b>46,127</b>	<b>35,693</b>	<b>31,800</b>

W = Withheld to avoid disclosure of individual company data.

Notes: \* Stocks are reported as of the end of December. \* Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," and EIA-816, "Monthly Natural Gas Liquids Report."



**Table 32. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, 1999**  
(Thousand Barrels)

Commodity	From I to			From II to				From III to	
	II	III	V	I	III	IV	V	I	II
Crude Oil .....	0	4,573	0	2,911	11,550	7,011	0	145	753,339
<b>Petroleum Products .....</b>	<b>108,832</b>	<b>1,265</b>	<b>0</b>	<b>28,583</b>	<b>83,036</b>	<b>39,198</b>	<b>29</b>	<b>1,120,498</b>	<b>357,809</b>
Pentanes Plus .....	0	0	0	0	2,174	3	0	0	7,424
Liquefied Petroleum Gases .....	562	0	0	10,162	56,247	1,172	0	28,932	44,162
Unfinished Oils .....	339	812	0	386	71	0	0	0	996
Motor Gasoline Blending Components .....	418	243	0	0	1,404	0	0	4,712	26,319
Finished Motor Gasoline .....	72,074	0	0	8,998	12,425	14,449	0	646,985	129,777
Reformulated .....	18	0	0	30	4,176	0	0	121,438	25,376
Oxygenated .....	0	0	0	0	0	135	0	0	0
Other .....	72,056	0	0	8,968	8,249	14,314	0	525,547	104,401
Finished Aviation Gasoline .....	0	0	0	0	0	143	0	1,103	1,073
Jet Fuel .....	3,613	0	0	891	295	13,101	0	161,238	59,526
Naphtha-Type .....	0	0	0	0	0	0	0	0	0
Kerosene-Type .....	3,613	0	0	891	295	13,101	0	161,238	59,526
Kerosene .....	76	0	0	456	0	0	0	990	591
Distillate Fuel Oil .....	31,222	0	0	4,903	6,312	10,330	0	245,644	75,431
0.05 percent sulfur and under .....	24,615	0	0	2,608	5,455	10,330	0	160,025	62,480
Greater than 0.05 percent sulfur .....	6,607	0	0	2,295	857	0	0	85,619	12,951
Residual Fuel Oil .....	0	130	0	290	3,806	0	0	15,961	354
Petrochemical Feedstocks <sup>a</sup> .....	528	0	0	36	81	0	0	1,735	271
Special Naphthas .....	0	17	0	0	14	0	0	1,307	1,888
Lubricants .....	0	63	0	650	207	0	29	9,824	5,080
Waxes .....	0	0	0	0	0	0	0	15	0
Asphalt and Road Oil .....	0	0	0	1,811	0	0	0	2,052	4,917
Miscellaneous Products .....	0	0	0	0	0	0	0	0	0
<b>Total .....</b>	<b>108,832</b>	<b>5,838</b>	<b>0</b>	<b>31,494</b>	<b>94,586</b>	<b>46,209</b>	<b>29</b>	<b>1,120,643</b>	<b>1,111,148</b>

Commodity	From III to		From IV to			From V to			
	IV	V	II	III	V	I	II	III	IV
Crude Oil .....	0	264	30,740	8,568	0	0	0	22,725	0
<b>Petroleum Products .....</b>	<b>5,480</b>	<b>36,860</b>	<b>28,516</b>	<b>33,121</b>	<b>12,047</b>	<b>0</b>	<b>0</b>	<b>933</b>	<b>0</b>
Pentanes Plus .....	0	0	2,065	3,161	0	0	0	0	0
Liquefied Petroleum Gases .....	0	0	17,327	29,960	0	0	0	0	0
Unfinished Oils .....	0	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components .....	0	5,555	0	0	0	0	0	128	0
Finished Motor Gasoline .....	4,087	23,040	5,556	0	8,622	0	0	238	0
Reformulated .....	0	278	0	0	0	0	0	238	0
Oxygenated .....	0	5,681	0	0	0	0	0	0	0
Other .....	4,087	17,081	5,556	0	8,622	0	0	0	0
Finished Aviation Gasoline .....	0	0	0	0	0	0	0	0	0
Jet Fuel .....	670	3,704	240	0	989	0	0	0	0
Naphtha-Type .....	0	0	0	0	0	0	0	0	0
Kerosene-Type .....	670	3,704	240	0	989	0	0	0	0
Kerosene .....	0	0	103	0	0	0	0	0	0
Distillate Fuel Oil .....	723	3,670	3,225	0	2,436	0	0	0	0
0.05 percent sulfur and under .....	723	2,691	3,225	0	2,387	0	0	0	0
Greater than 0.05 percent sulfur .....	0	979	0	0	49	0	0	0	0
Residual Fuel Oil .....	0	0	0	0	0	0	0	0	0
Petrochemical Feedstocks <sup>a</sup> .....	0	0	0	0	0	0	0	0	0
Special Naphthas .....	0	0	0	0	0	0	0	0	0
Lubricants .....	0	891	0	0	0	0	0	567	0
Waxes .....	0	0	0	0	0	0	0	0	0
Asphalt and Road Oil .....	0	0	0	0	0	0	0	0	0
Miscellaneous Products .....	0	0	0	0	0	0	0	0	0
<b>Total .....</b>	<b>5,480</b>	<b>37,124</b>	<b>59,256</b>	<b>41,689</b>	<b>12,047</b>	<b>0</b>	<b>0</b>	<b>23,658</b>	<b>0</b>

<sup>a</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," and EIA-817, "Monthly Tanker and Barge Movement Report."

**Table 33. Movements of Crude Oil and Petroleum Products by Pipeline Between PAD Districts, 1999**  
(Thousand Barrels)

Commodity	From I to		From II to			From III to	
	II	III	I	III	IV	I	II
Crude Oil .....	0	4,282	1,822	11,550	7,011	0	753,339
Petroleum Products .....	107,003	0	11,643	72,547	39,198	854,377	307,773
Pentanes Plus .....	0	0	0	2,174	3	0	7,424
Liquefied Petroleum Gases .....	562	0	10,162	56,247	1,172	26,073	44,162
Motor Gasoline Blending Components .....	10	0	0	1,316	0	800	25,733
Finished Motor Gasoline .....	71,934	0	1,226	10,121	14,449	493,877	106,394
Reformulated .....	18	0	11	4,176	0	119,767	18,119
Oxygenated .....	0	0	0	0	135	0	0
Other .....	71,916	0	1,215	5,945	14,314	374,110	88,275
Finished Aviation Gasoline .....	0	0	0	0	143	0	797
Jet Fuel .....	3,613	0	193	0	13,101	128,808	58,828
Naphtha-Type .....	0	0	0	0	0	0	0
Kerosene-Type .....	3,613	0	193	0	13,101	128,808	58,828
Kerosene .....	73	0	0	0	0	857	475
Distillate Fuel Oil .....	30,811	0	62	2,689	10,330	203,962	63,960
0.05 percent sulfur and under .....	24,556	0	62	2,053	10,330	129,248	58,789
Greater than 0.05 percent sulfur .....	6,255	0	0	636	0	74,714	5,171
Residual Fuel Oil .....	0	0	0	0	0	0	0
Miscellaneous Products .....	0	0	0	0	0	0	0
Total .....	107,003	4,282	13,465	84,097	46,209	854,377	1,061,112

Commodity	From III to		From IV to			From V to	
	IV	V	II	III	V	III	IV
Crude Oil .....	0	0	30,740	8,568	0	22,725	0
Petroleum Products .....	5,480	32,781	28,516	33,121	12,047	0	0
Pentanes Plus .....	0	0	2,065	3,161	0	0	0
Liquefied Petroleum Gases .....	0	0	17,327	29,960	0	0	0
Motor Gasoline Blending Components .....	0	2,992	0	0	0	0	0
Finished Motor Gasoline .....	4,087	22,570	5,556	0	8,622	0	0
Reformulated .....	0	0	0	0	0	0	0
Oxygenated .....	0	5,681	0	0	0	0	0
Other .....	4,087	16,889	5,556	0	8,622	0	0
Finished Aviation Gasoline .....	0	0	0	0	0	0	0
Jet Fuel .....	670	3,704	240	0	989	0	0
Naphtha-Type .....	0	0	0	0	0	0	0
Kerosene-Type .....	670	3,704	240	0	989	0	0
Kerosene .....	0	0	103	0	0	0	0
Distillate Fuel Oil .....	723	3,515	3,225	0	2,436	0	0
0.05 percent sulfur and under .....	723	2,536	3,225	0	2,387	0	0
Greater than 0.05 percent sulfur .....	0	979	0	0	49	0	0
Residual Fuel Oil .....	0	0	0	0	0	0	0
Miscellaneous Products .....	0	0	0	0	0	0	0
Total .....	5,480	32,781	59,256	41,689	12,047	22,725	0

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report," and EIA-813, Monthly Crude Oil Report."

**Table 34. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, 1999**  
(Thousand Barrels)

Commodity	From I to			From II to			From III to	
	II	III	V	I	III	V	I	New England
Crude Oil .....	0	291	0	1,089	0	0	145	0
<b>Petroleum Products .....</b>	<b>1,829</b>	<b>1,265</b>	<b>0</b>	<b>16,940</b>	<b>10,489</b>	<b>29</b>	<b>266,121</b>	<b>2,273</b>
Liquefied Petroleum Gases .....	0	0	0	0	0	0	2,859	0
Unfinished Oils .....	339	812	0	386	71	0	0	0
Motor Gasoline Blending Components .....	408	243	0	0	88	0	3,912	0
Finished Motor Gasoline .....	140	0	0	7,772	2,304	0	153,108	1,547
Reformulated .....	0	0	0	19	0	0	1,671	1,547
Oxygenated .....	0	0	0	0	0	0	0	0
Other .....	140	0	0	7,753	2,304	0	151,437	0
Finished Aviation Gasoline .....	0	0	0	0	0	0	1,103	30
Jet Fuel .....	0	0	0	698	295	0	32,430	0
Naphtha-Type .....	0	0	0	0	0	0	0	0
Kerosene-Type .....	0	0	0	698	295	0	32,430	0
Kerosene .....	3	0	0	456	0	0	133	0
Distillate Fuel Oil .....	411	0	0	4,841	3,623	0	41,682	696
0.05 percent sulfur and under .....	59	0	0	2,546	3,402	0	30,777	0
Greater than 0.05 percent sulfur .....	352	0	0	2,295	221	0	10,905	696
Residual Fuel Oil .....	0	130	0	290	3,806	0	15,961	0
Less than 0.31 percent sulfur .....	0	0	0	0	0	0	0	0
0.31 to 1.00 percent sulfur .....	0	0	0	0	7	0	477	0
Greater than 1.00 percent sulfur .....	0	130	0	290	3,799	0	15,484	0
Petrochemical Feedstocks <sup>a</sup> .....	528	0	0	36	81	0	1,735	0
Special Naphthas .....	0	17	0	0	14	0	1,307	0
Lubricants .....	0	63	0	650	207	29	9,824	0
Waxes .....	0	0	0	0	0	0	15	0
Asphalt and Road Oil .....	0	0	0	1,811	0	0	2,052	0
Miscellaneous Products .....	0	0	0	0	0	0	0	0
<b>Total .....</b>	<b>1,829</b>	<b>1,556</b>	<b>0</b>	<b>18,029</b>	<b>10,489</b>	<b>29</b>	<b>266,266</b>	<b>2,273</b>

Commodity	From III to				From V to		
	Central Atlantic	Lower Atlantic	II	V	I	II	III
Crude Oil .....	0	145	0	264	0	0	0
<b>Petroleum Products .....</b>	<b>10,622</b>	<b>253,226</b>	<b>50,036</b>	<b>4,079</b>	<b>0</b>	<b>0</b>	<b>933</b>
Liquefied Petroleum Gases .....	0	2,859	0	0	0	0	0
Unfinished Oils .....	0	0	996	0	0	0	0
Motor Gasoline Blending Components .....	3,650	262	586	2,563	0	0	128
Finished Motor Gasoline .....	281	151,280	23,383	470	0	0	238
Reformulated .....	124	0	7,257	278	0	0	238
Oxygenated .....	0	0	0	0	0	0	0
Other .....	157	151,280	16,126	192	0	0	0
Finished Aviation Gasoline .....	254	819	276	0	0	0	0
Jet Fuel .....	0	32,430	698	0	0	0	0
Naphtha-Type .....	0	0	0	0	0	0	0
Kerosene-Type .....	0	32,430	698	0	0	0	0
Kerosene .....	0	133	116	0	0	0	0
Distillate Fuel Oil .....	288	40,698	11,471	155	0	0	0
0.05 percent sulfur and under .....	55	30,722	3,691	155	0	0	0
Greater than 0.05 percent sulfur .....	233	9,976	7,780	0	0	0	0
Residual Fuel Oil .....	240	15,721	354	0	0	0	0
Less than 0.31 percent sulfur .....	0	0	0	0	0	0	0
0.31 to 1.00 percent sulfur .....	0	477	268	0	0	0	0
Greater than 1.00 percent sulfur .....	240	15,244	86	0	0	0	0
Petrochemical Feedstocks <sup>a</sup> .....	0	1,735	271	0	0	0	0
Special Naphthas .....	478	829	1,888	0	0	0	0
Lubricants .....	5,416	4,408	5,080	891	0	0	567
Waxes .....	15	0	0	0	0	0	0
Asphalt and Road Oil .....	0	2,052	4,917	0	0	0	0
Miscellaneous Products .....	0	0	0	0	0	0	0
<b>Total .....</b>	<b>10,622</b>	<b>253,371</b>	<b>50,036</b>	<b>4,343</b>	<b>0</b>	<b>0</b>	<b>933</b>

<sup>a</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

Source: Energy Information Administration (EIA) Form EIA-817, "Monthly Tanker and Barge Movement Report."



**Table 35. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, 1999**  
(Thousand Barrels)

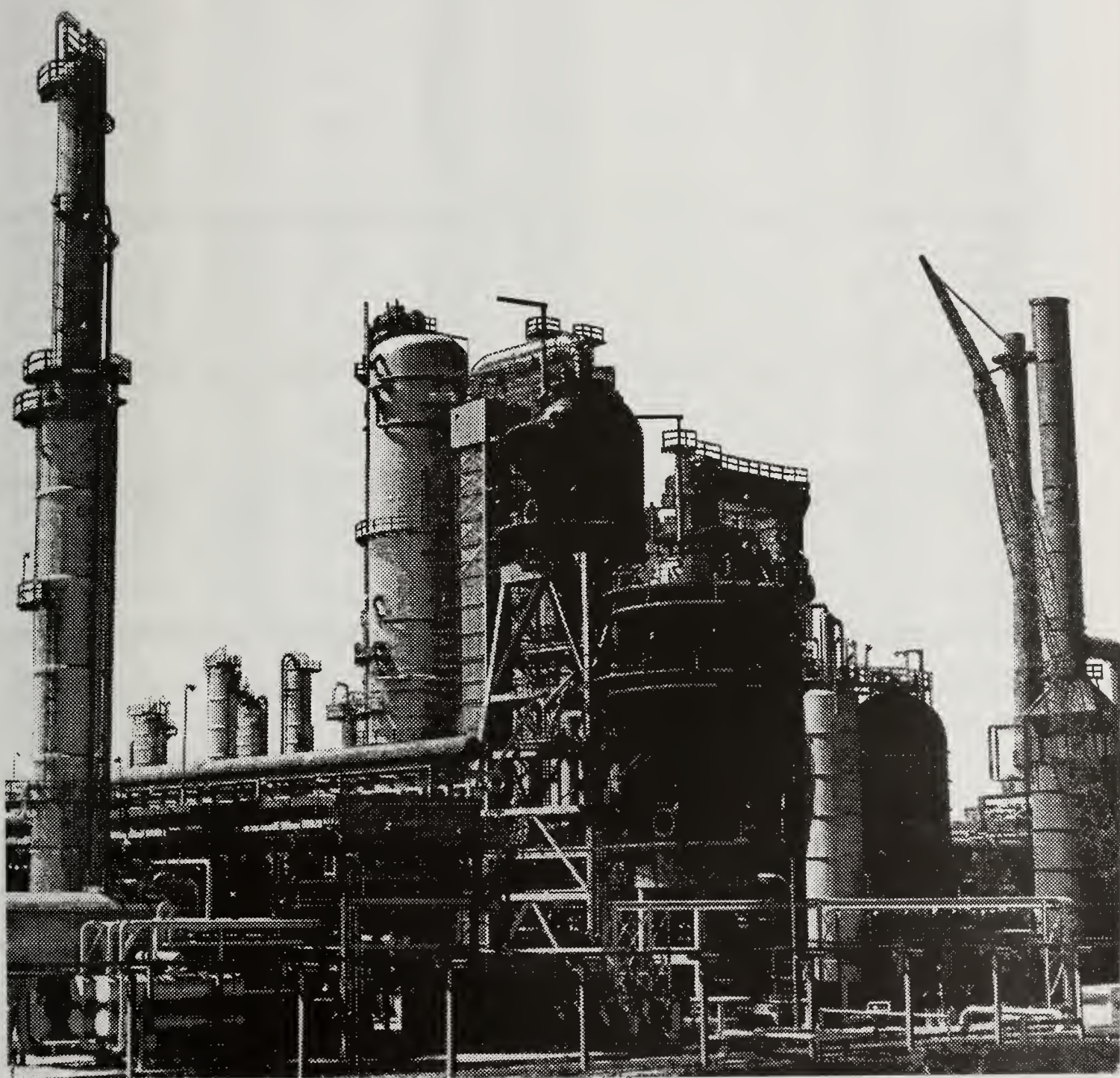
Commodity	PAD District I			PAD District II		
	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts
Crude Oil .....	3,056	4,573	-1,517	784,079	21,472	762,607
<b>Petroleum Products .....</b>	<b>1,149,081</b>	<b>110,097</b>	<b>1,038,984</b>	<b>495,157</b>	<b>150,846</b>	<b>344,311</b>
Pentanes Plus .....	0	0	0	9,489	2,177	7,312
Liquefied Petroleum Gases .....	39,094	562	38,532	62,051	67,581	-5,530
Ethane/Ethylene .....	0	0	0	9,098	31,723	-22,625
Propane/Propylene .....	38,078	36	38,042	37,964	26,908	11,056
Normal Butane/Butylene .....	872	494	378	8,571	7,192	1,379
Isobutane/Isobutylene .....	144	32	112	6,418	1,758	4,660
Unfinished Oils .....	386	1,151	-765	1,335	457	878
Motor Gasoline Blending Components .....	4,712	661	4,051	26,737	1,404	25,333
Finished Motor Gasoline .....	655,983	72,074	583,909	207,407	35,872	171,535
Reformulated .....	121,468	18	121,450	25,394	4,206	21,188
Oxygenated .....	0	0	0	0	135	-135
Other .....	534,515	72,056	462,459	182,013	31,531	150,482
Finished Aviation Gasoline .....	1,103	0	1,103	1,073	143	930
Jet Fuel .....	162,129	3,613	158,516	63,379	14,287	49,092
Naphtha-Type .....	0	0	0	0	0	0
Kerosene-Type .....	162,129	3,613	158,516	63,379	14,287	49,092
Kerosene .....	1,446	76	1,370	770	456	314
Distillate Fuel Oil .....	250,547	31,222	219,325	109,878	21,545	88,333
0.05 percent sulfur and under .....	162,633	24,615	138,018	90,320	18,393	71,927
Greater than 0.05 percent sulfur .....	87,914	6,607	81,307	19,558	3,152	16,406
Residual Fuel Oil .....	16,251	130	16,121	354	4,096	-3,742
Petrochemical Feedstocks <sup>a</sup> .....	1,771	528	1,243	799	117	682
Special Naphthas .....	1,307	17	1,290	1,888	14	1,874
Lubricants .....	10,474	63	10,411	5,080	886	4,194
Waxes .....	15	0	15	0	0	0
Asphalt and Road Oil .....	3,863	0	3,863	4,917	1,811	3,106
Miscellaneous Products .....	0	0	0	0	0	0
<b>Total .....</b>	<b>1,152,137</b>	<b>114,670</b>	<b>1,037,467</b>	<b>1,279,236</b>	<b>172,318</b>	<b>1,106,918</b>

Commodity	PAD District III			PAD District IV			PAD District V		
	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts
Crude Oil .....	47,416	753,748	-706,332	7,011	39,308	-32,297	264	22,725	-22,461
<b>Petroleum Products .....</b>	<b>118,355</b>	<b>1,520,647</b>	<b>-1,402,292</b>	<b>44,678</b>	<b>73,684</b>	<b>-29,006</b>	<b>48,936</b>	<b>933</b>	<b>48,003</b>
Pentanes Plus .....	5,335	7,424	-2,089	3	5,226	-5,223	0	0	0
Liquefied Petroleum Gases .....	86,207	73,094	13,113	1,172	47,287	-46,115	0	0	0
Ethane/Ethylene .....	48,610	2,744	45,866	0	23,241	-23,241	0	0	0
Propane/Propylene .....	24,345	59,278	-34,933	1,003	15,168	-14,165	0	0	0
Normal Butane/Butylene .....	9,307	5,848	3,459	168	5,384	-5,216	0	0	0
Isobutane/Isobutylene .....	3,945	5,224	-1,279	1	3,494	-3,493	0	0	0
Unfinished Oils .....	883	996	-113	0	0	0	0	0	0
Motor Gasoline Blending Components .....	1,775	36,586	-34,811	0	0	0	5,555	128	5,427
Finished Motor Gasoline .....	12,663	803,889	-791,226	18,536	14,178	4,358	31,662	238	31,424
Reformulated .....	4,414	147,092	-142,678	0	0	0	278	238	40
Oxygenated .....	0	5,681	-5,681	135	0	135	5,681	0	5,681
Other .....	8,249	651,116	-642,867	18,401	14,178	4,223	25,703	0	25,703
Finished Aviation Gasoline .....	0	2,176	-2,176	143	0	143	0	0	0
Jet Fuel .....	295	225,138	-224,843	13,771	1,229	12,542	4,693	0	4,693
Naphtha-Type .....	0	0	0	0	0	0	0	0	0
Kerosene-Type .....	295	225,138	-224,843	13,771	1,229	12,542	4,693	0	4,693
Kerosene .....	0	1,581	-1,581	0	103	-103	0	0	0
Distillate Fuel Oil .....	6,312	325,468	-319,156	11,053	5,661	5,392	6,106	0	6,106
0.05 percent sulfur and under .....	5,455	225,919	-220,464	11,053	5,612	5,441	5,078	0	5,078
Greater than 0.05 percent sulfur .....	857	99,549	-98,692	0	49	-49	1,028	0	1,028
Residual Fuel Oil .....	3,936	16,315	-12,379	0	0	0	0	0	0
Petrochemical Feedstocks <sup>a</sup> .....	81	2,006	-1,925	0	0	0	0	0	0
Special Naphthas .....	31	3,195	-3,164	0	0	0	0	0	0
Lubricants .....	837	15,795	-14,958	0	0	0	920	567	353
Waxes .....	0	15	-15	0	0	0	0	0	0
Asphalt and Road Oil .....	0	6,969	-6,969	0	0	0	0	0	0
Miscellaneous Products .....	0	0	0	0	0	0	0	0	0
<b>Total .....</b>	<b>165,771</b>	<b>2,274,395</b>	<b>-2,108,624</b>	<b>51,689</b>	<b>112,992</b>	<b>-61,303</b>	<b>49,200</b>	<b>23,658</b>	<b>25,542</b>

<sup>a</sup> Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," and EIA-817, "Monthly Tanker and Barge Movement Report."

## Refinery Statistics



*As part of the refining process, a catalytic cracking unit is used to increase the yield of gasoline from crude oil.*



**Table 36. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2000**

PAD District and State	Number of Operable Refineries			Atmospheric Crude Oil Distillation Capacity					
				Barrels per Calendar Day			Barrels per Stream Day		
	Total	Operating	Idle <sup>a</sup>	Total	Operating	Idle	Total	Operating	Idle
<b>PAD District I.....</b>	<b>17</b>	<b>16</b>	<b>1</b>	<b>1,704,000</b>	<b>1,610,000</b>	<b>94,000</b>	<b>1,792,958</b>	<b>1,693,958</b>	<b>99,000</b>
Delaware .....	1	1	0	157,000	157,000	0	160,000	160,000	0
Georgia .....	2	2	0	33,400	19,400	14,000	40,000	24,000	16,000
New Jersey.....	6	5	1	668,000	588,000	80,000	693,158	610,158	83,000
Pennsylvania .....	6	6	0	772,800	772,800	0	824,400	824,400	0
Virginia .....	1	1	0	59,500	59,500	0	61,900	61,900	0
West Virginia .....	1	1	0	13,300	13,300	0	13,500	13,500	0
<b>PAD District II.....</b>	<b>28</b>	<b>28</b>	<b>0</b>	<b>3,619,404</b>	<b>3,619,404</b>	<b>0</b>	<b>3,791,100</b>	<b>3,791,100</b>	<b>0</b>
Illinois .....	6	6	0	1,029,515	1,029,515	0	1,079,000	1,079,000	0
Indiana .....	2	2	0	433,000	433,000	0	456,000	456,000	0
Kansas .....	3	3	0	294,400	294,400	0	306,000	306,000	0
Kentucky.....	2	2	0	227,500	227,500	0	236,300	236,300	0
Michigan.....	1	1	0	74,000	74,000	0	75,000	75,000	0
Minnesota.....	2	2	0	330,000	330,000	0	355,000	355,000	0
North Dakota .....	1	1	0	58,000	58,000	0	60,000	60,000	0
Ohio.....	4	4	0	525,500	525,500	0	539,000	539,000	0
Oklahoma.....	5	5	0	454,489	454,489	0	480,500	480,500	0
Tennessee.....	1	1	0	160,000	160,000	0	169,300	169,300	0
Wisconsin.....	1	1	0	33,000	33,000	0	35,000	35,000	0
<b>PAD District III.....</b>	<b>57</b>	<b>56</b>	<b>1</b>	<b>7,552,942</b>	<b>7,546,242</b>	<b>6,700</b>	<b>7,984,312</b>	<b>7,977,312</b>	<b>7,000</b>
Alabama .....	3	3	0	130,000	130,000	0	138,000	138,000	0
Arkansas .....	3	2	1	66,912	60,212	6,700	68,750	61,750	7,000
Louisiana.....	17	17	0	2,678,580	2,678,580	0	2,804,255	2,804,255	0
Mississippi.....	4	4	0	335,800	335,800	0	384,000	384,000	0
New Mexico.....	3	3	0	95,600	95,600	0	100,107	100,107	0
Texas.....	27	27	0	4,246,050	4,246,050	0	4,489,200	4,489,200	0
<b>PAD District IV .....</b>	<b>16</b>	<b>15</b>	<b>1</b>	<b>540,755</b>	<b>530,755</b>	<b>10,000</b>	<b>572,200</b>	<b>559,700</b>	<b>12,500</b>
Colorado.....	2	2	0	84,500	84,500	0	92,000	92,000	0
Montana .....	4	4	0	162,090	162,090	0	167,700	167,700	0
Utah.....	5	4	1	162,000	152,000	10,000	172,500	160,000	12,500
Wyoming .....	5	5	0	132,165	132,165	0	140,000	140,000	0
<b>PAD District V.....</b>	<b>40</b>	<b>40</b>	<b>0</b>	<b>3,094,770</b>	<b>3,008,570</b>	<b>86,200</b>	<b>3,252,500</b>	<b>3,157,700</b>	<b>94,800</b>
Alaska.....	6	6	0	359,550	359,550	0	383,000	383,000	0
California.....	23	23	0	1,982,000	1,905,000	77,000	2,082,400	1,997,600	84,800
Hawaii.....	2	2	0	147,500	147,500	0	152,000	152,000	0
Nevada .....	2	2	0	5,000	5,000	0	7,000	7,000	0
Oregon.....	1	1	0	0	0	0	0	0	0
Washington .....	6	6	0	600,720	591,520	9,200	628,100	618,100	10,000
<b>U.S. Total.....</b>	<b>158</b>	<b>155</b>	<b>3</b>	<b>16,511,871</b>	<b>16,314,971</b>	<b>196,900</b>	<b>17,393,070</b>	<b>17,179,770</b>	<b>213,300</b>
Puerto Rico .....	3	2	1	87,000	42,000	45,000	94,000	48,000	46,000
Virgin Islands.....	1	1	0	495,000	430,000	65,000	525,000	450,000	75,000

See footnotes at end of table.



Table 36. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2000 (Continued)

PAD District and State	Downstream Charge Capacity (Barrels per Stream Day)							Fuels Solvent Deasphalting
	Vacuum Distillation	Thermal Cracking	Catalytic Cracking		Catalytic Hydro- cracking	Catalytic Reforming	Catalytic Hydro- treating	
			Fresh	Recycled				
PAD District I .....	735,180	91,500	730,500	8,000	42,200	321,762	1,011,244	22,200
Delaware .....	102,000	46,500	77,000	5,000	20,000	41,000	171,000	0
Georgia .....	0	0	0	0	0	0	0	0
New Jersey .....	284,600	24,500	321,400	0	0	85,100	316,400	22,200
Pennsylvania .....	307,100	0	304,000	1,000	22,200	180,320	483,100	0
Virginia .....	34,700	20,500	28,100	2,000	0	11,500	30,800	0
West Virginia .....	6,780	0	0	0	0	3,842	9,944	0
PAD District II .....	1,522,400	384,400	1,281,050	13,550	156,700	894,800	2,533,610	31,300
Illinois .....	440,000	132,900	361,000	3,000	70,500	284,700	667,900	0
Indiana .....	263,000	36,000	173,200	4,200	0	96,500	329,800	0
Kansas .....	121,000	57,500	90,000	500	0	66,500	269,400	0
Kentucky .....	91,000	0	100,000	0	0	48,000	195,300	14,000
Michigan .....	41,000	0	30,000	0	0	19,000	52,200	0
Minnesota .....	204,500	67,000	109,000	0	0	69,000	358,000	0
North Dakota .....	0	0	26,000	3,600	0	12,100	17,600	0
Ohio .....	185,500	57,500	184,000	0	81,200	164,000	266,000	12,800
Oklahoma .....	155,900	33,500	126,850	2,250	5,000	111,000	286,610	4,500
Tennessee .....	0	0	70,000	0	0	16,000	74,000	0
Wisconsin .....	20,500	0	11,000	0	0	8,000	16,800	0
PAD District III .....	3,579,494	1,033,576	2,934,988	51,900	773,700	1,837,549	5,505,500	220,500
Alabama .....	59,000	12,000	0	0	0	27,200	76,600	0
Arkansas .....	27,200	0	19,100	0	0	13,000	54,000	5,500
Louisiana .....	1,190,919	458,380	1,079,100	11,000	199,000	520,711	1,622,588	41,000
Mississippi .....	311,875	75,000	68,000	0	167,000	96,000	164,400	0
New Mexico .....	23,000	0	34,500	4,500	0	30,800	67,300	0
Texas .....	1,967,500	488,196	1,734,288	36,400	407,700	1,149,838	3,520,612	174,000
PAD District IV .....	224,450	42,500	181,900	11,190	16,500	123,695	361,350	9,040
Colorado .....	32,500	0	28,500	1,100	0	20,700	48,200	0
Montana .....	80,450	24,000	55,900	4,490	5,500	37,030	145,000	4,000
Utah .....	44,000	8,500	48,000	5,100	0	35,380	74,700	5,040
Wyoming .....	67,500	10,000	49,500	500	11,000	30,585	93,450	0
PAD District V .....	1,555,300	611,300	820,500	14,000	586,700	592,100	2,028,000	68,000
Alaska .....	26,000	0	0	0	12,500	12,000	12,000	0
California .....	1,163,500	511,300	673,100	11,000	499,200	423,700	1,691,000	50,000
Hawaii .....	74,300	13,000	22,000	0	18,000	13,000	15,500	0
Nevada .....	7,000	0	0	0	0	0	0	0
Oregon .....	12,000	0	0	0	0	0	0	0
Washington .....	272,500	87,000	125,400	3,000	57,000	143,400	309,500	18,000
U.S. Total .....	7,616,824	2,163,276	5,948,938	98,640	1,575,800	3,769,906	11,439,704	351,040
Puerto Rico .....	57,000	0	0	0	15,600	49,700	67,800	0
Virgin Islands .....	230,000	85,000	140,000	0	0	115,000	405,000	0

<sup>a</sup> Refineries where distillation units were completely idle but not permanently shutdown on January 1, 2000.  
Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."

**Table 37. Production Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2000**  
(Barrels per Stream Day, Except Where Noted)

PAD District and State	Production Capacity							
	Alkylates	Aromatics	Asphalt and Road Oil	Isomers	Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons/day)
<b>PAD District I .....</b>	<b>104,100</b>	<b>20,900</b>	<b>169,183</b>	<b>26,250</b>	<b>22,918</b>	<b>19,510</b>	<b>94</b>	<b>1,289</b>
Delaware .....	9,100	1,400	0	0	0	8,710	62	596
Georgia .....	0	0	27,000	0	0	0	0	0
New Jersey .....	35,500	7,500	121,900	13,300	12,000	7,500	20	283
Pennsylvania .....	55,300	12,000	20,000	12,950	6,850	0	11	370
Virginia .....	4,200	0	0	0	0	3,300	0	39
West Virginia .....	0	0	283	0	4,068	0	1	1
<b>PAD District II .....</b>	<b>271,050</b>	<b>56,400</b>	<b>308,216</b>	<b>178,570</b>	<b>17,500</b>	<b>98,955</b>	<b>380</b>	<b>4,937</b>
Illinois .....	97,500	13,500	104,664	17,750	0	31,900	99	1,713
Indiana .....	37,700	17,000	65,700	28,200	0	13,400	31	550
Kansas .....	26,200	3,000	0	28,500	0	15,325	6	422
Kentucky .....	12,000	11,700	23,000	13,250	8,500	0	0	448
Michigan .....	4,000	0	22,000	0	0	0	0	147
Minnesota .....	19,000	0	30,000	24,000	0	18,000	90	903
North Dakota .....	5,600	0	0	5,000	0	0	0	17
Ohio .....	25,300	11,200	26,500	27,000	200	12,700	110	524
Oklahoma .....	30,250	0	28,852	26,870	8,800	7,630	44	158
Tennessee .....	12,000	0	0	6,000	0	0	0	43
Wisconsin .....	1,500	0	7,500	2,000	0	0	0	12
<b>PAD District III .....</b>	<b>572,800</b>	<b>233,524</b>	<b>234,600</b>	<b>301,084</b>	<b>145,060</b>	<b>226,101</b>	<b>1,309</b>	<b>15,279</b>
Alabama .....	0	0	22,500	3,100	0	2,500	6	43
Arkansas .....	4,900	0	10,500	6,500	5,000	0	3	157
Louisiana .....	210,800	30,300	62,600	101,484	60,500	99,291	195	4,771
Mississippi .....	16,200	21,000	42,700	0	8,100	4,800	238	1,300
New Mexico .....	11,200	0	6,400	11,000	0	0	0	42
Texas .....	329,700	182,224	89,900	179,000	71,460	119,510	867	8,966
<b>PAD District IV .....</b>	<b>39,227</b>	<b>0</b>	<b>53,800</b>	<b>14,796</b>	<b>0</b>	<b>8,655</b>	<b>92</b>	<b>646</b>
Colorado .....	0	0	9,000	1,046	0	0	0	98
Montana .....	14,900	0	23,700	5,750	0	5,775	60	372
Utah .....	15,050	0	1,700	7,000	0	380	0	54
Wyoming .....	9,277	0	19,400	1,000	0	2,500	32	122
<b>PAD District V .....</b>	<b>197,800</b>	<b>4,300</b>	<b>120,123</b>	<b>121,900</b>	<b>32,400</b>	<b>110,759</b>	<b>1,268</b>	<b>4,494</b>
Alaska .....	0	2,800	6,000	4,000	0	0	13	15
California .....	163,400	1,500	74,483	96,000	32,400	103,085	1,138	4,011
Hawaii .....	5,000	0	16,000	3,200	0	0	21	34
Nevada .....	0	0	1,000	0	0	0	0	0
Oregon .....	0	0	7,440	0	0	0	0	0
Washington .....	29,400	0	15,200	18,700	0	7,674	96	434
<b>U.S. Total .....</b>	<b>1,184,977</b>	<b>315,124</b>	<b>885,922</b>	<b>642,600</b>	<b>217,878</b>	<b>463,980</b>	<b>3,143</b>	<b>26,645</b>
Puerto Rico .....	0	19,200	1,000	0	9,200	0	19	83
Virgin Islands .....	20,000	20,000	0	18,000	0	0	0	600

MMcfd = Million cubic feet per day.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."



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**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Vacuum Distillation	Downstream Charge Capacity			
	Barrels per Calendar Day		Barrels per Stream Day			Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Alabama .....	130,000	0	138,000	0	59,000	12,000	0	0	0
Coastal Mobile Refining Co.									
Chickasaw .....	16,500	0	18,000	0	14,000	0	0	0	0
Hunt Refining Co.									
Tuscaloosa .....	33,500	0	35,000	0	15,000	12,000	0	0	0
Shell Chemical									
Saraland (Mobile) .....	80,000	0	85,000	0	30,000	0	0	0	0
Alaska.....	359,550	0	383,000	0	26,000	0	0	0	0
Arco Alaska Inc.									
Kuparuk (Anchorage) .....	14,000	0	16,000	0	0	0	0	0	0
Prudhoe Bay.....	15,000	0	16,000	0	0	0	0	0	0
Petro Star Inc.									
North Pole .....	14,000	0	15,000	0	0	0	0	0	0
Valdez.....	38,000	0	41,000	0	0	0	0	0	0
Tesoro Petroleum Corp.									
Kenai .....	72,000	0	80,000	0	20,000	0	0	0	0
Williams Alaska Petro Inc.									
North Pole .....	206,550	0	215,000	0	6,000	0	0	0	0
Arkansas .....	60,212	6,700	61,750	7,000	27,200	0	0	0	0
Berry Petroleum Co.									
Stephens .....	0	6,700	0	7,000	3,700	0	0	0	0
Cross Oil & Refining Co. Inc.									
Smackover.....	6,212	0	6,750	0	3,500	0	0	0	0
Lion Oil Co.									
El Dorado .....	54,000	0	55,000	0	20,000	0	0	0	0
California.....	1,905,000	77,000	1,997,600	84,800	1,163,500	407,700	98,600	5,000	0
Arco Products Co.									
Los Angeles .....	260,000	0	260,500	0	130,000	65,000	0	0	0
Chevron U.S.A. Inc.									
El Segundo.....	260,000	0	273,000	0	137,000	66,000	0	0	0
Richmond .....	225,000	0	240,000	0	115,000	0	0	0	0
Equilon Enterprises LLC									
Bakersfield.....	65,000	0	67,000	0	36,100	21,600	0	0	0
Martinez .....	156,200	0	162,500	0	108,500	26,000	22,500	0	0
Wilmington .....	96,500	0	100,000	0	62,000	43,000	0	0	0
ExxonMobil Refg & Supply Co.									
(Formerly Exxon Co. U.S.A.)									
Benicia .....	129,500	0	135,000	0	71,500	0	29,500	0	0
(Formerly Mobil Oil Corp.)									
Torrance .....	149,000	0	160,000	0	107,000	57,000	0	0	0
Golden Bear Oil Specialties									
Bakersfield.....	0	0	0	0	11,000	0	0	0	0
Greka Energy									
(Formerly Santa Maria Refg Co.)									
Santa Maria.....	9,500	0	10,000	0	10,000	0	0	0	0
Huntway Refining Co.									
Benicia .....	12,600	0	13,000	0	12,000	0	0	0	0
Wilmington .....	5,500	0	6,000	0	5,700	0	0	0	0
Kern Oil & Refining Co.									
Bakersfield.....	24,000	0	25,000	0	0	0	0	0	0
Lunday Thagard									
South Gate .....	8,100	0	8,500	0	7,000	0	0	0	0
Paramount Petroleum Corp.									
Paramount.....	46,500	0	48,500	0	28,000	0	0	0	0
Petroleum Fuel & Terminal									
Long Beach.....	14,000	12,000	25,000	15,000	0	0	0	0	0

See footnotes at end of table.

**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/Residual	
<b>Alabama</b> .....	0	0	0	7,200	20,000	12,000	31,600	33,000	0	0
Chickasaw .....	0	0	0	0	0	0	0	0	0	0
Tuscaloosa .....	0	0	0	7,200	0	12,000	13,100	12,000	0	0
Saraland (Mobile) .....	0	0	0	0	20,000	0	18,500	21,000	0	0
<b>Alaska</b> .....	0	0	12,500	12,000	0	0	12,000	0	0	0
Kuparuk (Anchorage) .....	0	0	0	0	0	0	0	0	0	0
Prudhoe Bay .....	0	0	0	0	0	0	0	0	0	0
North Pole .....	0	0	0	0	0	0	0	0	0	0
Valdez .....	0	0	0	0	0	0	0	0	0	0
Kenai .....	0	0	12,500	12,000	0	0	12,000	0	0	0
North Pole .....	0	0	0	0	0	0	0	0	0	0
<b>Arkansas</b> .....	19,100	0	0	13,000	0	21,000	20,000	8,500	4,500	5,500
Stephens .....	0	0	0	0	0	0	0	0	0	0
Smackover .....	0	0	0	0	0	0	0	0	4,500	0
El Dorado .....	19,100	0	0	13,000	0	21,000	20,000	8,500	0	5,500
<b>California</b> .....	673,100	11,000	499,200	186,600	237,100	633,700	490,800	430,400	136,100	50,000
Los Angeles .....	96,000	0	43,000	0	52,000	90,000	40,000	17,000	15,700	0
El Segundo .....	65,000	0	49,000	42,000	0	72,000	73,500	60,000	15,000	0
Richmond .....	70,000	0	154,000	62,000	0	0	55,000	95,000	26,000	50,000
Bakersfield .....	0	0	22,000	11,800	0	20,000	12,500	0	4,700	0
Martinez .....	73,000	1,000	38,000	31,000	0	75,000	28,000	24,000	41,100	0
Wilmington .....	35,000	0	31,000	0	29,000	32,000	22,000	15,000	10,500	0
Benicia .....	75,300	0	36,700	0	37,200	39,000	77,000	27,900	21,700	0
Torrance .....	85,000	10,000	27,000	0	22,000	106,000	25,000	18,000	0	0
Bakersfield .....	0	0	0	0	0	0	0	2,000	1,400	0
Santa Maria .....	0	0	0	0	0	0	0	0	0	0
Benicia .....	0	0	0	0	0	0	0	0	0	0
Wilmington .....	0	0	0	0	0	0	0	0	0	0
Bakersfield .....	0	0	0	0	3,300	0	5,000	9,000	0	0
South Gate .....	0	0	0	0	0	0	0	0	0	0
Paramount .....	0	0	0	0	0	12,000	10,000	8,000	0	0
Long Beach .....	0	0	0	0	0	0	0	0	0	0

See footnotes at end of table.



**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Vacuum Distillation	Downstream Charge Capacity			
	Barrels per Calendar Day		Barrels per Stream Day			Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
San Joaquin Refining Co Inc.									
Bakersfield .....	14,300	10,000	15,000	12,000	14,300	0	0	5,000	0
Tenby Inc.									
Oxnard .....	4,000	0	5,000	0	0	0	0	0	0
Tosco Refining Co.									
Arroyo Grande.....	41,800	0	44,000	0	33,600	23,400	0	0	0
Martinez (Avon).....	101,000	55,000	106,300	57,800	107,300	0	46,600	0	0
Rodeo .....	73,200	0	77,000	0	40,400	23,400	0	0	0
Wilmington .....	130,500	0	137,300	0	82,100	53,300	0	0	0
Ultramar Refining									
Wilmington .....	78,800	0	79,000	0	45,000	29,000	0	0	0
<b>Colorado .....</b>	<b>84,500</b>	<b>0</b>	<b>92,000</b>	<b>0</b>	<b>32,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Colorado Refining Co.									
Commerce City .....	27,000	0	32,000	0	7,500	0	0	0	0
Conoco Inc.									
Commerce City .....	57,500	0	60,000	0	25,000	0	0	0	0
<b>Delaware .....</b>	<b>157,000</b>	<b>0</b>	<b>160,000</b>	<b>0</b>	<b>102,000</b>	<b>0</b>	<b>46,500</b>	<b>0</b>	<b>0</b>
Motiva Enterprises LLC									
Delaware City.....	157,000	0	160,000	0	102,000	0	46,500	0	0
<b>Georgia .....</b>	<b>19,400</b>	<b>14,000</b>	<b>24,000</b>	<b>16,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Citgo Asphalt Refining Co.									
Savannah .....	14,000	14,000	16,000	16,000	0	0	0	0	0
Young Refining Corp.									
Douglasville.....	5,400	0	8,000	0	0	0	0	0	0
<b>Hawaii .....</b>	<b>147,500</b>	<b>0</b>	<b>152,000</b>	<b>0</b>	<b>74,300</b>	<b>0</b>	<b>0</b>	<b>13,000</b>	<b>0</b>
Chevron U.S.A. Inc.									
Honolulu.....	54,000	0	57,000	0	31,300	0	0	0	0
Tesoro Hawaii Corp.									
Ewa Beach .....	93,500	0	95,000	0	43,000	0	0	13,000	0
<b>Illinois .....</b>	<b>1,029,515</b>	<b>0</b>	<b>1,079,000</b>	<b>0</b>	<b>440,000</b>	<b>132,900</b>	<b>0</b>	<b>0</b>	<b>0</b>
Clark Refining & Marketing									
Blue Island .....	80,515	0	81,000	0	35,000	0	0	0	0
Hartford .....	64,000	0	67,000	0	30,000	17,500	0	0	0
Equilon Enterprises LLC									
Wood River .....	288,300	0	310,000	0	119,000	0	0	0	0
ExxonMobil Refg & Supply Co.									
(Formerly Mobil Oil Corp.)									
Joliet.....	240,000	0	250,000	0	115,000	50,400	0	0	0
Marathon Ashland Petro LLC									
Robinson.....	192,000	0	204,000	0	66,000	28,000	0	0	0
PDV Midwest Refining LLC									
Lemont (Chicago) .....	164,700	0	167,000	0	75,000	37,000	0	0	0
<b>Indiana .....</b>	<b>433,000</b>	<b>0</b>	<b>456,000</b>	<b>0</b>	<b>263,000</b>	<b>36,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
BP Amoco PLC									
Whiting .....	410,000	0	432,000	0	255,000	36,000	0	0	0
Countrymark Cooperative Inc.									
Mount Vernon.....	23,000	0	24,000	0	8,000	0	0	0	0
<b>Kansas .....</b>	<b>294,400</b>	<b>0</b>	<b>306,000</b>	<b>0</b>	<b>121,000</b>	<b>57,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
Cooperative Rfng LLC									
(Formerly Farmland Industries Inc.)									
Coffeyville.....	112,000	0	115,000	0	50,000	17,500	0	0	0
(Formerly National Cooperative Refinery Assoc.)									
McPherson.....	77,400	0	82,000	0	32,000	22,000	0	0	0

See footnotes at end of table.



**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Heavy Gas Oil	Catalytic Hydrotreating			Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure		Naphtha Reformer Feed	Distillate	Other/Residual	
Bakersfield.....	0	0	0	0	0	0	0	3,000	0	0
Oxnard .....	0	0	0	0	0	0	0	0	0	0
Arroyo Grande.....	0	0	0	0	0	0	0	0	0	0
Martinez (Avon) .....	73,800	0	35,500	23,800	20,500	72,200	33,300	52,200	0	0
Rodeo.....	0	0	35,500	0	34,000	0	23,000	24,500	0	0
Wilmington .....	50,000	0	27,500	0	39,100	55,500	56,500	38,800	0	0
Wilmington .....	50,000	0	0	16,000	0	60,000	30,000	36,000	0	0
<b>Colorado .....</b>	<b>28,500</b>	<b>1,100</b>	<b>0</b>	<b>20,700</b>	<b>0</b>	<b>14,500</b>	<b>20,700</b>	<b>13,000</b>	<b>0</b>	<b>0</b>
Commerce City .....	9,500	1,100	0	10,500	0	0	10,500	0	0	0
Commerce City .....	19,000	0	0	10,200	0	14,500	10,200	13,000	0	0
<b>Delaware .....</b>	<b>77,000</b>	<b>5,000</b>	<b>20,000</b>	<b>41,000</b>	<b>0</b>	<b>0</b>	<b>79,000</b>	<b>59,000</b>	<b>33,000</b>	<b>0</b>
Delaware City .....	77,000	5,000	20,000	41,000	0	0	79,000	59,000	33,000	0
<b>Georgia.....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Savannah .....	0	0	0	0	0	0	0	0	0	0
Douglasville.....	0	0	0	0	0	0	0	0	0	0
<b>Hawaii.....</b>	<b>22,000</b>	<b>0</b>	<b>18,000</b>	<b>13,000</b>	<b>0</b>	<b>0</b>	<b>12,000</b>	<b>0</b>	<b>3,500</b>	<b>0</b>
Honolulu .....	22,000	0	0	0	0	0	0	0	3,500	0
Ewa Beach .....	0	0	18,000	13,000	0	0	12,000	0	0	0
<b>Illinois.....</b>	<b>361,000</b>	<b>3,000</b>	<b>70,500</b>	<b>211,000</b>	<b>73,700</b>	<b>29,000</b>	<b>307,200</b>	<b>301,200</b>	<b>30,500</b>	<b>0</b>
Blue Island .....	30,000	0	10,000	16,000	12,500	0	21,000	0	0	0
Hartford .....	27,000	0	0	0	14,000	0	13,500	14,700	0	0
Wood River.....	94,000	0	33,500	75,000	16,000	29,000	64,000	80,000	30,500	0
Joliet.....	98,000	0	0	44,000	0	0	88,000	86,000	0	0
Robinson .....	48,000	0	27,000	76,000	0	0	59,000	70,000	0	0
Lemont (Chicago).....	64,000	3,000	0	0	31,200	0	61,700	50,500	0	0
<b>Indiana.....</b>	<b>173,200</b>	<b>4,200</b>	<b>0</b>	<b>6,500</b>	<b>90,000</b>	<b>101,300</b>	<b>127,500</b>	<b>101,000</b>	<b>0</b>	<b>0</b>
Whiting .....	165,000	4,000	0	0	90,000	101,300	117,500	101,000	0	0
Mount Vernon .....	8,200	200	0	6,500	0	0	10,000	0	0	0
<b>Kansas .....</b>	<b>90,000</b>	<b>500</b>	<b>0</b>	<b>29,000</b>	<b>37,500</b>	<b>48,000</b>	<b>104,000</b>	<b>106,400</b>	<b>11,000</b>	<b>0</b>
Coffeyville.....	30,000	0	0	0	17,000	0	30,000	37,000	0	0
McPherson .....	21,500	500	0	21,500	0	0	33,500	35,000	11,000	0

See footnotes at end of table.

**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Frontier El Dorado Refg Co. (Formerly Equilon Enterprises LLC) El Dorado .....	105,000	0	109,000	0	39,000	18,000	0	0	0
<b>Kentucky .....</b>	<b>227,500</b>	<b>0</b>	<b>236,300</b>	<b>0</b>	<b>91,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marathon Ashland Petro LLC Catlettsburg .....	222,000	0	230,000	0	91,000	0	0	0	0
Somerset Refinery Inc. Somerset .....	5,500	0	6,300	0	0	0	0	0	0
<b>Louisiana .....</b>	<b>2,678,580</b>	<b>0</b>	<b>2,804,255</b>	<b>0</b>	<b>1,190,919</b>	<b>432,800</b>	<b>0</b>	<b>13,580</b>	<b>12,000</b>
BP Amoco PLC Belle Chasse (Alliance) .....	250,000	0	255,000	0	92,000	25,800	0	0	0
Calcasieu Refining Co. Lake Charles .....	15,300	0	15,600	0	0	0	0	0	0
Calumet Lubricants Co. LP Cotton Valley .....	7,800	0	8,500	0	0	0	0	0	0
Princeton .....	8,300	0	8,655	0	7,000	0	0	0	0
Chalmette Refining LLC Chalmette .....	190,080	0	198,000	0	106,000	38,000	0	0	0
Citgo Petroleum Corp. Lake Charles .....	317,000	0	328,000	0	85,500	101,000	0	0	0
Conoco Inc. Westlake .....	240,000	0	250,000	0	115,500	66,000	0	0	12,000
ExxonMobil Refg & Supply Co. (Formerly Exxon Co. U.S.A.) Baton Rouge .....	483,000	0	503,000	0	227,000	110,000	0	0	0
Marathon Ashland Petro LLC Garyville .....	232,000	0	245,000	0	126,000	0	0	0	0
Motiva Enterprises LLC Convent .....	232,400	0	245,000	0	109,619	0	0	13,580	0
Norco .....	225,000	0	240,000	0	80,000	27,000	0	0	0
Murphy Oil U.S.A. Inc. Meraux .....	95,000	0	100,000	0	50,000	0	0	0	0
Orion Refining Corp. Good Hope .....	155,000	0	172,000	0	120,000	65,000	0	0	0
Pennzoil - Quaker State Corp. Shreveport .....	46,200	0	50,000	0	24,300	0	0	0	0
Placid Refining Co. Port Allen .....	48,500	0	49,500	0	20,000	0	0	0	0
Shell Chemical Saint Rose .....	55,000	0	56,000	0	28,000	0	0	0	0
Valero Refining Co. Krotz Springs .....	78,000	0	80,000	0	0	0	0	0	0
<b>Michigan .....</b>	<b>74,000</b>	<b>0</b>	<b>75,000</b>	<b>0</b>	<b>41,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Marathon Ashland Petro LLC Detroit .....	74,000	0	75,000	0	41,000	0	0	0	0
<b>Minnesota .....</b>	<b>330,000</b>	<b>0</b>	<b>355,000</b>	<b>0</b>	<b>204,500</b>	<b>67,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
Koch Petroleum Group Inc. Saint Paul .....	260,000	0	280,000	0	170,000	67,000	0	0	0
Marathon Ashland Petro LLC Saint Paul Park .....	70,000	0	75,000	0	34,500	0	0	0	0
<b>Mississippi .....</b>	<b>335,800</b>	<b>0</b>	<b>384,000</b>	<b>0</b>	<b>311,875</b>	<b>75,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
Chevron U.S.A. Inc. Pascagoula .....	295,000	0	340,000	0	286,000	75,000	0	0	0

See footnotes at end of table.



**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
El Dorado .....	38,500	0	0	7,500	20,500	48,000	40,500	34,400	0	0
<b>Kentucky .....</b>	<b>100,000</b>	<b>0</b>	<b>0</b>	<b>47,000</b>	<b>1,000</b>	<b>42,000</b>	<b>65,300</b>	<b>77,000</b>	<b>11,000</b>	<b>14,000</b>
Catlettsburg .....	100,000	0	0	47,000	0	42,000	64,000	77,000	11,000	14,000
Somerset .....	0	0	0	0	1,000	0	1,300	0	0	0
<b>Louisiana .....</b>	<b>1,079,100</b>	<b>11,000</b>	<b>199,000</b>	<b>351,000</b>	<b>169,711</b>	<b>314,595</b>	<b>632,743</b>	<b>561,850</b>	<b>113,400</b>	<b>41,000</b>
Belle Chasse (Alliance) .....	104,000	2,000	0	0	44,100	0	48,000	65,000	0	0
Lake Charles .....	0	0	0	0	0	0	0	0	0	0
Cotton Valley .....	0	0	0	0	0	0	3,600	0	0	0
Princeton .....	0	0	0	0	0	0	0	0	8,500	0
Chalmette .....	75,000	0	22,000	21,000	31,000	46,000	40,000	32,000	0	0
Lake Charles .....	130,000	0	38,000	88,000	18,000	68,000	118,000	34,000	27,000	0
Westlake .....	51,000	0	28,000	48,000	0	0	52,700	128,500	13,000	0
Baton Rouge .....	228,000	0	25,000	71,000	0	0	153,500	90,000	47,700	0
Garyville .....	114,000	0	0	45,000	0	95,000	46,000	52,000	0	36,000
Convent .....	89,900	0	52,000	0	42,111	39,195	45,943	60,350	0	0
Norco .....	110,000	0	34,000	40,000	22,000	0	38,000	45,000	0	0
Meraux .....	38,000	0	0	18,000	0	27,500	22,000	15,000	0	0
Good Hope .....	85,000	0	0	0	0	30,000	30,000	30,000	16,000	0
Shreveport .....	3,500	7,000	0	10,000	0	8,900	10,000	10,000	1,200	0
Port Allen .....	19,000	2,000	0	10,000	0	0	12,000	0	0	5,000
Saint Rose .....	0	0	0	0	0	0	0	0	0	0
Krotz Springs .....	31,700	0	0	0	12,500	0	13,000	0	0	0
<b>Michigan .....</b>	<b>30,000</b>	<b>0</b>	<b>0</b>	<b>19,000</b>	<b>0</b>	<b>17,800</b>	<b>15,000</b>	<b>19,400</b>	<b>0</b>	<b>0</b>
Detroit .....	30,000	0	0	19,000	0	17,800	15,000	19,400	0	0
<b>Minnesota .....</b>	<b>109,000</b>	<b>0</b>	<b>0</b>	<b>57,000</b>	<b>12,000</b>	<b>125,000</b>	<b>102,000</b>	<b>131,000</b>	<b>0</b>	<b>0</b>
Saint Paul .....	84,000	0	0	37,000	12,000	100,000	80,000	105,000	0	0
Saint Paul Park .....	25,000	0	0	20,000	0	25,000	22,000	26,000	0	0
<b>Mississippi .....</b>	<b>68,000</b>	<b>0</b>	<b>167,000</b>	<b>62,000</b>	<b>34,000</b>	<b>0</b>	<b>54,800</b>	<b>65,500</b>	<b>44,100</b>	<b>0</b>
Pascagoula .....	68,000	0	167,000	62,000	34,000	0	54,800	65,500	36,000	0

See footnotes at end of table.



**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Ergon Refining Inc.									
Vicksburg .....	24,000	0	25,000	0	19,000	0	0	0	0
Southland Oil Co.									
Lumberton.....	5,800	0	6,500	0	0	0	0	0	0
Sandersville .....	11,000	0	12,500	0	6,875	0	0	0	0
<b>Montana .....</b>	<b>162,090</b>	<b>0</b>	<b>167,700</b>	<b>0</b>	<b>80,450</b>	<b>15,000</b>	<b>9,000</b>	<b>0</b>	<b>0</b>
Cenex Harvest States Coop									
Laurel.....	45,590	0	47,000	0	23,500	0	0	0	0
Conoco Inc.									
Billings.....	51,500	0	53,000	0	26,500	15,000	0	0	0
ExxonMobil Refg & Supply Co. (Formerly Exxon Co. U.S.A.)									
Billings.....	58,000	0	60,500	0	27,000	0	9,000	0	0
Montana Refining Co.									
Great Falls.....	7,000	0	7,200	0	3,450	0	0	0	0
<b>Nevada .....</b>	<b>5,000</b>	<b>0</b>	<b>7,000</b>	<b>0</b>	<b>7,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Foreland Refining Corp.									
Eagle Springs.....	5,000	0	7,000	0	5,000	0	0	0	0
Tonapah .....	0	0	0	0	2,000	0	0	0	0
<b>New Jersey .....</b>	<b>588,000</b>	<b>80,000</b>	<b>610,158</b>	<b>83,000</b>	<b>284,600</b>	<b>24,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
Amerada Hess Corp.									
Port Reading .....	0	0	0	0	0	0	0	0	0
Chevron U.S.A. Inc.									
Perth Amboy .....	0	80,000	0	83,000	47,000	0	0	0	0
Citgo Asphalt Refining Co.									
Paulsboro.....	40,000	0	44,000	0	40,000	0	0	0	0
Coastal Eagle Point Oil Co.									
Westville.....	143,000	0	145,000	0	49,000	0	0	0	0
Tosco Refining Co.									
Linden (Bayway) .....	250,000	0	263,158	0	65,200	0	0	0	0
Valero Refining Co.									
Paulsboro.....	155,000	0	158,000	0	83,400	24,500	0	0	0
<b>New Mexico .....</b>	<b>95,600</b>	<b>0</b>	<b>100,107</b>	<b>0</b>	<b>23,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Giant Industries Inc.									
Bloomfield .....	16,800	0	18,107	0	0	0	0	0	0
Giant Refining Co.									
Gallup.....	20,800	0	21,000	0	0	0	0	0	0
Navajo Refining Co.									
Artesia.....	58,000	0	61,000	0	23,000	0	0	0	0
<b>North Dakota .....</b>	<b>58,000</b>	<b>0</b>	<b>60,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
BP Amoco PLC									
Mandan.....	58,000	0	60,000	0	0	0	0	0	0
<b>Ohio.....</b>	<b>525,500</b>	<b>0</b>	<b>539,000</b>	<b>0</b>	<b>185,500</b>	<b>57,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
BP Amoco PLC									
Toledo .....	157,000	0	160,000	0	69,500	36,000	0	0	0
Clark Refining & Marketing									
Lima.....	161,500	0	165,000	0	52,000	21,500	0	0	0
Marathon Ashland Petro LLC									
Canton .....	73,000	0	74,000	0	34,000	0	0	0	0
Sun Co Inc.									
Toledo .....	134,000	0	140,000	0	30,000	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									Fuel Solvents Deasphalting
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Vicksburg.....	0	0	0	0	0	0	0	0	8,100	0
Lumberton.....	0	0	0	0	0	0	0	0	0	0
Sandersville.....	0	0	0	0	0	0	0	0	0	0
Montana .....	55,900	4,490	5,500	12,000	25,030	41,400	42,600	55,000	6,000	4,000
Laurel .....	13,500	0	0	12,000	0	16,000	16,000	17,000	0	4,000
Billings.....	19,000	990	0	0	12,000	22,400	10,000	15,000	0	0
Billings.....	21,000	3,500	5,500	0	12,000	0	15,500	20,000	6,000	0
Great Falls.....	2,400	0	0	0	1,030	3,000	1,100	3,000	0	0
Nevada .....	0	0	0	0	0	0	0	0	0	0
Eagle Springs.....	0	0	0	0	0	0	0	0	0	0
Tonapah.....	0	0	0	0	0	0	0	0	0	0
New Jersey.....	321,400	0	0	61,100	24,000	50,000	84,200	147,700	34,500	22,200
Port Reading .....	62,500	0	0	0	0	0	0	0	0	0
Perth Amboy.....	0	0	0	0	0	0	0	0	0	0
Paulsboro .....	0	0	0	0	0	0	0	0	0	0
Westville.....	55,000	0	0	30,000	0	0	28,000	18,000	11,000	0
Linden (Bayway).....	153,300	0	0	31,100	0	50,000	32,200	87,700	0	22,200
Paulsboro .....	50,600	0	0	0	24,000	0	24,000	42,000	23,500	0
New Mexico.....	34,500	4,500	0	15,000	15,800	0	34,800	32,500	0	0
Bloomfield .....	6,000	500	0	0	4,000	0	4,000	3,000	0	0
Gallup.....	8,500	3,000	0	0	6,800	0	6,800	3,000	0	0
Artesia.....	20,000	1,000	0	15,000	5,000	0	24,000	26,500	0	0
North Dakota.....	26,000	3,600	0	0	12,100	0	17,600	0	0	0
Mandan .....	26,000	3,600	0	0	12,100	0	17,600	0	0	0
Ohio.....	184,000	0	81,200	19,000	145,000	65,000	176,000	25,000	0	12,800
Toledo.....	60,000	0	30,000	0	43,000	40,000	40,000	15,000	0	0
Lima .....	40,000	0	23,000	0	54,000	0	60,000	0	0	0
Canton.....	24,000	0	0	19,000	0	25,000	26,000	10,000	0	0
Toledo.....	60,000	0	28,200	0	48,000	0	50,000	0	0	12,800

See footnotes at end of table.

**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
<b>Oklahoma</b> .....	<b>454,489</b>	<b>0</b>	<b>480,500</b>	<b>0</b>	<b>155,900</b>	<b>33,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
Conoco Inc.									
Ponca City .....	174,000	0	188,000	0	56,400	24,700	0	0	0
Sinclair Oil Corp.									
Tulsa .....	68,500	0	68,500	0	23,500	0	0	0	0
Sun Co Inc.									
Tulsa .....	85,000	0	90,000	0	29,000	8,800	0	0	0
TPI Petroleum Inc.									
Ardmore .....	76,989	0	80,000	0	32,000	0	0	0	0
Wynnewood Refining Co.									
Wynnewood .....	50,000	0	54,000	0	15,000	0	0	0	0
<b>Oregon</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Chevron U.S.A. Inc.									
Portland (Willbridge) .....	0	0	0	0	12,000	0	0	0	0
<b>Pennsylvania</b> .....	<b>772,800</b>	<b>0</b>	<b>824,400</b>	<b>0</b>	<b>307,100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
American Refining Group Inc.									
Bradford .....	10,000	0	10,500	0	0	0	0	0	0
Pennzoil - Quaker State Corp.									
Rouseville .....	12,800	0	16,500	0	6,500	0	0	0	0
Sun Co Inc.									
Marcus Hook .....	175,000	0	185,000	0	36,000	0	0	0	0
Sun Refining & Marketing									
Philadelphia .....	330,000	0	355,000	0	160,000	0	0	0	0
Tosco Refining Co.									
Trainer .....	180,000	0	189,400	0	73,600	0	0	0	0
United Refining Co.									
Warren .....	65,000	0	68,000	0	31,000	0	0	0	0
<b>Tennessee</b> .....	<b>160,000</b>	<b>0</b>	<b>169,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Williams Refining LLC									
Memphis .....	160,000	0	169,300	0	0	0	0	0	0
<b>Texas</b> .....	<b>4,246,050</b>	<b>0</b>	<b>4,489,200</b>	<b>0</b>	<b>1,967,500</b>	<b>436,196</b>	<b>42,000</b>	<b>10,000</b>	<b>0</b>
Age Refining & Marketing									
San Antonio .....	9,000	0	10,000	0	0	0	0	0	0
BP Amoco PLC									
Texas City .....	437,000	0	460,000	0	240,000	42,500	0	0	0
Chevron U.S.A. Inc.									
El Paso .....	90,000	0	102,000	0	43,000	0	0	0	0
Citgo Refining & Chemical Inc.									
Corpus Christi .....	156,000	0	165,000	0	68,000	41,896	0	0	0
Clark Refining & Marketing									
Port Arthur .....	212,000	0	240,000	0	100,000	37,500	0	0	0
Coastal Refining & Marketing Inc.									
Corpus Christi .....	98,000	0	107,000	0	58,000	18,000	0	10,000	0
Crown Central Petroleum Corp.									
Pasadena .....	100,000	0	103,000	0	38,000	12,500	0	0	0
Deer Park Refg Ltd Ptnrshp									
Deer Park .....	274,200	0	280,000	0	149,500	65,000	0	0	0
Diamond Shamrock Refining & Marketing Co.									
Sunray (McKee) .....	145,900	0	152,000	0	50,000	0	0	0	0
Three Rivers .....	90,000	0	96,000	0	33,000	0	0	0	0
ExxonMobil Refg & Supply Co.									
(Formerly Exxon Co. U.S.A.)									
Baytown .....	505,000	0	526,000	0	246,000	0	42,000	0	0
(Formerly Mobil Oil Corp.)									
Beaumont .....	348,400	0	355,000	0	145,000	44,600	0	0	0

See footnotes at end of table.



**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/Residual	
<b>Oklahoma</b> .....	<b>126,850</b>	<b>2,250</b>	<b>5,000</b>	<b>31,000</b>	<b>80,000</b>	<b>51,810</b>	<b>126,500</b>	<b>97,800</b>	<b>10,500</b>	<b>4,500</b>
Ponca City.....	59,950	0	0	0	46,500	22,800	46,500	48,800	0	0
Tulsa .....	22,500	2,250	0	0	15,500	0	20,000	17,500	0	0
Tulsa .....	0	0	0	0	18,000	0	25,000	0	10,500	0
Ardmore .....	26,400	0	0	18,000	0	29,010	24,000	31,500	0	0
Wynnewood .....	18,000	0	5,000	13,000	0	0	11,000	0	0	4,500
<b>Oregon</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Portland (Willbridge) .....	0	0	0	0	0	0	0	0	0	0
<b>Pennsylvania</b> .....	<b>304,000</b>	<b>1,000</b>	<b>22,200</b>	<b>58,520</b>	<b>121,800</b>	<b>66,200</b>	<b>222,500</b>	<b>186,400</b>	<b>8,000</b>	<b>0</b>
Bradford .....	0	0	0	0	1,800	0	3,300	0	0	0
Rouseville .....	0	0	0	5,820	0	0	6,500	0	8,000	0
Marcus Hook.....	105,000	0	0	0	20,000	0	45,000	40,000	0	0
Philadelphia .....	118,500	0	0	0	86,000	24,000	88,000	79,000	0	0
Trainer.....	55,500	0	22,200	52,700	0	42,200	57,700	44,400	0	0
Warren .....	25,000	1,000	0	0	14,000	0	22,000	23,000	0	0
<b>Tennessee</b> .....	<b>70,000</b>	<b>0</b>	<b>0</b>	<b>16,000</b>	<b>0</b>	<b>0</b>	<b>30,000</b>	<b>44,000</b>	<b>0</b>	<b>0</b>
Memphis .....	70,000	0	0	16,000	0	0	30,000	44,000	0	0
<b>Texas</b> .....	<b>1,734,288</b>	<b>36,400</b>	<b>407,700</b>	<b>823,338</b>	<b>326,500</b>	<b>654,831</b>	<b>1,224,451</b>	<b>1,231,970</b>	<b>409,360</b>	<b>174,000</b>
San Antonio .....	0	0	0	0	0	0	0	0	0	0
Texas City .....	220,000	4,000	120,000	70,000	75,000	100,000	143,000	140,000	0	0
El Paso.....	30,000	0	0	22,700	0	0	23,100	21,500	0	0
Corpus Christi.....	80,138	0	0	50,038	0	60,331	48,751	45,920	0	0
Port Arthur .....	65,000	0	0	50,000	0	65,000	50,000	90,000	23,000	0
Corpus Christi.....	20,000	0	10,500	0	29,000	25,000	33,000	24,000	0	0
Pasadena.....	56,000	0	0	23,000	0	0	28,000	7,000	16,000	0
Deer Park.....	70,000	5,000	68,500	47,300	27,000	93,500	65,000	35,000	12,000	0
Sunray (McKee) .....	48,500	0	30,000	25,000	18,000	0	35,000	34,000	0	17,000
Three Rivers .....	25,000	0	27,000	20,000	11,000	10,500	22,000	7,800	0	10,000
Baytown .....	205,000	5,000	28,000	123,000	0	107,000	145,000	203,500	66,500	64,500
Beaumont .....	111,000	0	55,000	150,000	0	0	143,000	93,000	0	0

See footnotes at end of table.

**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Fina Oil & Chemical Co.									
Big Spring .....	58,500	0	61,000	0	24,000	0	0	0	0
Port Arthur .....	178,500	0	183,500	0	52,000	0	0	0	0
Koch Petroleum Group Inc.									
Corpus Christi .....	297,000	0	305,000	0	110,000	15,200	0	0	0
La Gloria Oil & Gas Co.									
Tyler .....	55,000	0	60,000	0	15,000	6,000	0	0	0
Lyondell Citgo Refining Co. Ltd.									
Houston .....	262,650	0	287,000	0	193,500	97,000	0	0	0
Marathon Ashland Petro LLC									
Texas City .....	72,000	0	76,000	0	0	0	0	0	0
Motiva Enterprises LLC									
Port Arthur .....	238,000	0	259,000	0	120,500	56,000	0	0	0
Neste Trifinery Petro Serve									
Corpus Christi .....	27,000	0	29,000	0	27,000	0	0	0	0
Phillips 66 Co.									
Borger .....	125,000	0	135,000	0	0	0	0	0	0
Sweeny .....	205,000	0	213,000	0	74,000	0	0	0	0
South Hampton Refining Co.									
Silsbee .....	0	0	0	0	0	0	0	0	0
Specified Fuels & Chemis LLC									
Channelview .....	1,400	0	1,700	0	0	0	0	0	0
Valero Refining Co.									
Corpus Christi .....	36,000	0	38,000	0	32,000	0	0	0	0
Houston .....	72,500	0	85,000	0	39,000	0	0	0	0
Texas City .....	152,000	0	160,000	0	110,000	0	0	0	0
<b>Utah .....</b>	<b>152,000</b>	<b>10,000</b>	<b>160,000</b>	<b>12,500</b>	<b>44,000</b>	<b>8,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
BP Amoco PLC									
Salt Lake City .....	58,000	0	60,000	0	0	0	0	0	0
Big West Oil Co.									
North Salt Lake .....	24,000	0	25,000	0	5,000	0	0	0	0
Chevron U.S.A. Inc.									
Salt Lake City .....	45,000	0	49,000	0	27,500	8,500	0	0	0
Inland Refining Inc.									
Woods Cross .....	0	10,000	0	12,500	6,000	0	0	0	0
Phillips 66 Co.									
Woods Cross .....	25,000	0	26,000	0	5,500	0	0	0	0
<b>Virginia .....</b>	<b>59,500</b>	<b>0</b>	<b>61,900</b>	<b>0</b>	<b>34,700</b>	<b>20,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
BP Amoco PLC									
Yorktown .....	59,500	0	61,900	0	34,700	20,500	0	0	0
<b>Washington .....</b>	<b>591,520</b>	<b>9,200</b>	<b>618,100</b>	<b>10,000</b>	<b>272,500</b>	<b>87,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
Arco Products Co.									
Ferndale (Cherry Point) .....	222,720	0	232,000	0	101,000	62,000	0	0	0
Chevron U.S.A. Inc.									
Richmond Beach .....	0	0	0	0	6,200	0	0	0	0
Equilon Enterprises LLC									
Anacortes .....	142,000	0	147,500	0	60,000	25,000	0	0	0
Tesoro Northwest Co.									
Anacortes .....	107,500	0	112,000	0	47,000	0	0	0	0
Tosco Refining Co.									
Ferndale .....	88,500	0	93,100	0	32,600	0	0	0	0
U.S. Oil & Refining Co.									
Tacoma .....	30,800	9,200	33,500	10,000	25,700	0	0	0	0
<b>West Virginia .....</b>	<b>13,300</b>	<b>0</b>	<b>13,500</b>	<b>0</b>	<b>6,780</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Ergon West Virginia Inc.									
Newell (Congo) .....	13,300	0	13,500	0	6,780	0	0	0	0

See footnotes at end of table.

**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/Residual	
Big Spring.....	25,000	0	0	21,000	0	6,500	25,500	22,750	2,500	10,000
Port Arthur.....	64,000	0	0	35,000	0	27,000	44,200	55,000	0	19,500
Corpus Christi .....	110,000	0	11,700	52,000	23,500	18,000	113,000	63,000	0	0
Tyler.....	20,250	0	0	13,000	4,500	0	20,000	12,000	0	0
Houston.....	99,000	0	0	22,500	42,000	103,000	81,900	124,000	4,360	0
Texas City.....	43,000	0	0	0	11,000	0	0	0	0	0
Port Arthur.....	90,000	0	21,000	48,000	0	31,000	59,500	71,000	0	0
Corpus Christi .....	0	0	0	0	0	0	0	0	0	0
Borger .....	60,000	10,400	0	0	26,000	0	26,500	40,000	66,000	0
Sweeny.....	99,400	12,000	0	0	37,500	8,000	55,700	51,000	74,500	0
Silsbee .....	0	0	0	800	0	0	3,800	0	500	0
Channelview.....	0	0	0	0	0	0	0	0	0	0
Corpus Christi .....	85,000	0	36,000	37,000	0	0	26,000	0	74,000	0
Houston.....	60,000	0	0	0	12,500	0	12,500	33,500	0	18,000
Texas City.....	48,000	0	0	13,000	9,500	0	20,000	58,000	70,000	35,000
<b>Utah .....</b>	<b>48,000</b>	<b>5,100</b>	<b>0</b>	<b>0</b>	<b>35,380</b>	<b>0</b>	<b>42,300</b>	<b>25,200</b>	<b>7,200</b>	<b>5,040</b>
Salt Lake City .....	21,000	2,000	0	0	12,000	0	12,000	0	0	0
North Salt Lake .....	5,000	500	0	0	5,500	0	7,000	7,000	0	0
Salt Lake City .....	14,000	0	0	0	8,000	0	8,300	13,300	7,200	0
Woods Cross.....	0	0	0	0	2,200	0	3,000	3,200	0	0
Woods Cross.....	8,000	2,600	0	0	7,680	0	12,000	1,700	0	5,040
<b>Virginia.....</b>	<b>28,100</b>	<b>2,000</b>	<b>0</b>	<b>0</b>	<b>11,500</b>	<b>0</b>	<b>11,900</b>	<b>18,900</b>	<b>0</b>	<b>0</b>
Yorktown.....	28,100	2,000	0	0	11,500	0	11,900	18,900	0	0
<b>Washington.....</b>	<b>125,400</b>	<b>3,000</b>	<b>57,000</b>	<b>106,200</b>	<b>37,200</b>	<b>7,600</b>	<b>144,700</b>	<b>118,200</b>	<b>39,000</b>	<b>18,000</b>
Ferndale (Cherry Point).....	0	0	57,000	63,000	0	0	57,000	26,000	0	0
Richmond Beach.....	0	0	0	0	0	0	0	0	0	0
Anacortes .....	54,000	0	0	0	31,000	0	29,000	16,000	39,000	0
Anacortes .....	43,700	3,000	0	26,000	0	7,600	34,000	29,300	0	18,000
Ferndale .....	27,700	0	0	17,200	0	0	17,200	41,100	0	0
Tacoma .....	0	0	0	0	6,200	0	7,500	5,800	0	0
<b>West Virginia.....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,842</b>	<b>0</b>	<b>5,424</b>	<b>4,520</b>	<b>0</b>	<b>0</b>	<b>0</b>
Newell (Congo).....	0	0	0	3,842	0	5,424	4,520	0	0	0

See footnotes at end of table.



**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Vacuum Distillation	Downstream Charge Capacity			
	Barrels per Calendar Day		Barrels per Stream Day			Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Wisconsin .....	33,000	0	35,000	0	20,500	0	0	0	0
Murphy Oil U.S.A. Inc. Superior .....	33,000	0	35,000	0	20,500	0	0	0	0
Wyoming .....	132,165	0	140,000	0	67,500	10,000	0	0	0
Frontier Refg Inc. Cheyenne .....	38,670	0	41,000	0	23,500	10,000	0	0	0
Little America Refining Co. Evansville (Casper) .....	24,500	0	25,500	0	12,000	0	0	0	0
Silver Eagle Refining Evanston .....	3,000	0	3,000	0	0	0	0	0	0
Sinclair Oil Corp. Sinclair .....	56,000	0	58,000	0	30,500	0	0	0	0
Wyoming Refining Co. Newcastle .....	9,995	0	12,500	0	1,500	0	0	0	0
U.S. Total .....	16,314,971	196,900	17,179,770	213,300	7,616,824	1,913,596	196,100	41,580	12,000
Puerto Rico .....	42,000	45,000	48,000	46,000	57,000	0	0	0	0
Caribbean Petroleum Corp. Bayamon .....	42,000	0	48,000	0	22,000	0	0	0	0
Phillips Puerto Rico Core Inc. Guayama .....	0	0	0	0	0	0	0	0	0
Sun Co Inc. Yabucoa .....	0	45,000	0	46,000	35,000	0	0	0	0
Virgin Islands .....	430,000	65,000	450,000	75,000	230,000	0	0	85,000	0
Hovensa LLC Kingshill (St Croix) .....	430,000	65,000	450,000	75,000	230,000	0	0	85,000	0

See footnotes at end of table.

**Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Heavy Gas Oil	Catalytic Hydrotreating			Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure		Naphtha Reformer Feed	Distillate	Other/Residual	
Wisconsin .....	11,000	0	0	8,000	0	0	9,000	7,800	0	0
Superior.....	11,000	0	0	8,000	0	0	9,000	7,800	0	0
Wyoming .....	49,500	500	11,000	7,500	23,085	15,000	30,950	44,500	3,000	0
Cheyenne .....	12,000	0	0	7,500	0	0	8,000	16,500	0	0
Evansville (Casper) .....	10,500	500	0	0	6,000	0	7,200	8,000	0	0
Evanston .....	0	0	0	0	1,835	0	3,250	0	0	0
Sinclair.....	21,500	0	11,000	0	12,500	15,000	12,500	16,000	3,000	0
Newcastle.....	5,500	0	0	0	2,750	0	0	4,000	0	0
<b>U.S. Total.....</b>	<b>5,948,938</b>	<b>98,640</b>	<b>1,575,800</b>	<b>2,237,500</b>	<b>1,532,406</b>	<b>2,316,160</b>	<b>4,276,664</b>	<b>3,942,220</b>	<b>904,660</b>	<b>351,040</b>
Puerto Rico .....	0	0	15,600	43,200	6,500	0	56,800	11,000	0	0
Bayamon .....	0	0	0	0	6,500	0	6,800	11,000	0	0
Guayama.....	0	0	0	43,200	0	0	50,000	0	0	0
Yabucoa.....	0	0	15,600	0	0	0	0	0	0	0
Virgin Islands.....	140,000	0	0	90,000	25,000	135,000	115,000	155,000	0	0
Kingshill (St Croix).....	140,000	0	0	90,000	25,000	135,000	115,000	155,000	0	0

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."

**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
<b>Alabama.....</b>	<b>0</b>	<b>0</b>	<b>22,500</b>	<b>1,100</b>	<b>2,000</b>	<b>0</b>	<b>2,500</b>	<b>6</b>	<b>43</b>
Coastal Mobile Refining Co.									
Chickasaw.....	0	0	10,500	0	0	0	0	0	0
Hunt Refining Co.									
Tuscaloosa.....	0	0	12,000	0	0	0	2,500	6	8
Shell Chemical									
Saraland (Mobile).....	0	0	0	1,100	2,000	0	0	0	35
<b>Alaska .....</b>	<b>0</b>	<b>2,800</b>	<b>6,000</b>	<b>0</b>	<b>4,000</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>15</b>
Tesoro Petroleum Corp.									
Kenai.....	0	0	0	0	4,000	0	0	13	15
Williams Alaska Petro Inc.									
North Pole.....	0	2,800	6,000	0	0	0	0	0	0
<b>Arkansas.....</b>	<b>4,900</b>	<b>0</b>	<b>10,500</b>	<b>0</b>	<b>6,500</b>	<b>5,000</b>	<b>0</b>	<b>3</b>	<b>157</b>
Berry Petroleum Co.									
Stephens.....	0	0	1,200	0	0	0	0	0	0
Cross Oil & Refining Co. Inc.									
Smackover.....	0	0	1,500	0	0	5,000	0	3	0
Lion Oil Co.									
El Dorado.....	4,900	0	7,800	0	6,500	0	0	0	157
<b>California .....</b>	<b>163,400</b>	<b>1,500</b>	<b>74,483</b>	<b>24,500</b>	<b>71,500</b>	<b>32,400</b>	<b>103,085</b>	<b>1,138</b>	<b>4,011</b>
Arco Products Co.									
Los Angeles.....	15,000	0	0	0	0	0	11,400	105	350
Chevron U.S.A. Inc.									
El Segundo.....	24,500	0	0	4,000	20,000	0	4,000	130	600
Richmond.....	21,000	0	0	0	28,000	18,500	0	185	448
Equilon Enterprises LLC									
Bakersfield.....	0	0	0	700	0	0	6,000	24	105
Martinez.....	11,000	0	15,000	0	0	3,900	8,385	107	392
Wilmington.....	9,000	0	0	3,500	0	0	10,000	15	315
ExxonMobil Refg & Supply Co.									
(Formerly Exxon Co. U.S.A.)									
Benicia.....	15,800	0	0	0	0	0	6,400	141	303
(Formerly Mobil Oil Corp.)									
Torrance.....	26,000	0	0	6,000	0	0	17,000	147	280
Golden Bear Oil Specialties									
Bakersfield.....	0	0	4,000	0	0	6,000	0	0	0
Greka Energy									
(Formerly Santa Maria Refg Co.)									
Santa Maria.....	0	0	6,100	0	0	0	0	0	0
Huntway Refining Co.									
Benicia.....	0	0	6,600	0	0	0	0	0	0
Wilmington.....	0	0	3,500	0	0	0	0	0	0
Kern Oil & Refining Co.									
Bakersfield.....	0	0	0	0	0	0	0	0	5
Lunday Thagard									
South Gate.....	0	0	5,833	0	0	0	0	0	0
Paramount Petroleum Corp.									
Paramount.....	0	0	15,000	0	0	0	0	0	40
Petroleum Fuel & Terminal									
Long Beach.....	0	0	10,750	0	0	0	0	0	0
San Joaquin Refining Co Inc.									
Bakersfield.....	0	1,500	6,500	0	0	4,000	0	4	3
Tenby Inc.									
Oxnard.....	0	0	1,200	0	0	0	0	0	0

See footnotes at end of table.



**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
<b>Tosco Refining Co.</b>									
Arroyo Grande .....	0	0	0	0	0	0	5,500	0	110
Martinez (Avon) .....	16,600	0	0	0	0	0	8,300	80	150
Rodeo .....	0	0	0	0	10,000	0	5,500	90	310
Wilmington .....	10,500	0	0	3,300	13,500	0	11,100	110	370
<b>Ultramar Refining</b>									
Wilmington .....	14,000	0	0	7,000	0	0	9,500	0	230
<b>Colorado.....</b>	<b>0</b>	<b>0</b>	<b>9,000</b>	<b>1,046</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>98</b>
<b>Colorado Refining Co.</b>									
Commerce City .....	0	0	0	1,046	0	0	0	0	4
<b>Conoco Inc.</b>									
Commerce City .....	0	0	9,000	0	0	0	0	0	94
<b>Delaware.....</b>	<b>9,100</b>	<b>1,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,710</b>	<b>62</b>	<b>596</b>
<b>Motiva Enterprises LLC</b>									
Delaware City .....	9,100	1,400	0	0	0	0	8,710	62	596
<b>Georgia.....</b>	<b>0</b>	<b>0</b>	<b>27,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Citgo Asphalt Refining Co.</b>									
Savannah .....	0	0	24,000	0	0	0	0	0	0
<b>Young Refining Corp.</b>									
Douglasville .....	0	0	3,000	0	0	0	0	0	0
<b>Hawaii.....</b>	<b>5,000</b>	<b>0</b>	<b>16,000</b>	<b>3,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>34</b>
<b>Chevron U.S.A. Inc.</b>									
Honolulu .....	5,000	0	15,000	3,200	0	0	0	3	0
<b>Tesoro Hawaii Corp.</b>									
Ewa Beach .....	0	0	1,000	0	0	0	0	18	34
<b>Illinois.....</b>	<b>97,500</b>	<b>13,500</b>	<b>104,664</b>	<b>0</b>	<b>17,750</b>	<b>0</b>	<b>31,900</b>	<b>99</b>	<b>1,713</b>
<b>Clark Refining &amp; Marketing</b>									
Blue Island .....	6,000	0	5,000	0	0	0	0	14	20
Hartford .....	8,500	0	250	0	3,750	0	4,800	3	11
<b>Equilon Enterprises LLC</b>									
Wood River .....	22,000	4,500	55,000	0	0	0	0	57	504
<b>ExxonMobil Refg &amp; Supply Co.</b>									
(Formerly Mobil Oil Corp)									
Joliet .....	28,000	0	10,000	0	0	0	17,000	0	600
<b>Marathon Ashland Petro LLC</b>									
Robinson .....	12,000	0	0	0	14,000	0	8,000	25	202
<b>PDV Midwest Refining LLC</b>									
Lemont (Chicago) .....	21,000	9,000	34,414	0	0	0	2,100	0	376
<b>Indiana.....</b>	<b>37,700</b>	<b>17,000</b>	<b>65,700</b>	<b>0</b>	<b>28,200</b>	<b>0</b>	<b>13,400</b>	<b>31</b>	<b>550</b>
<b>BP Amoco PLC</b>									
Whiting .....	36,000	17,000	63,000	0	26,000	0	13,400	31	550
<b>Countrymark Cooperative Inc.</b>									
Mount Vernon .....	1,700	0	2,700	0	2,200	0	0	0	0
<b>Kansas.....</b>	<b>26,200</b>	<b>3,000</b>	<b>0</b>	<b>3,500</b>	<b>25,000</b>	<b>0</b>	<b>15,325</b>	<b>6</b>	<b>422</b>
<b>Cooperative Rfng LLC</b>									
(Formerly Farmland Industries Inc.)									
Coffeyville .....	7,700	0	0	0	0	0	7,000	0	151
(Formerly National Cooperative Refinery Assoc.)									
McPherson .....	7,000	0	0	3,500	10,000	0	3,325	0	81

See footnotes at end of table.

**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Frontier Refg & Mktg Inc. (Formerly Equilon Enterprises LLC) El Dorado.....	11,500	3,000	0	0	15,000	0	5,000	6	190
<b>Kentucky.....</b>	<b>12,000</b>	<b>11,700</b>	<b>23,000</b>	<b>0</b>	<b>13,250</b>	<b>8,500</b>	<b>0</b>	<b>0</b>	<b>448</b>
Marathon Ashland Petro LLC Catlettsburg.....	12,000	11,700	23,000	0	13,000	8,500	0	0	448
Somerset Refinery Inc. Somerset .....	0	0	0	0	250	0	0	0	0
<b>Louisiana.....</b>	<b>210,800</b>	<b>30,300</b>	<b>62,600</b>	<b>32,550</b>	<b>68,934</b>	<b>60,500</b>	<b>99,291</b>	<b>195</b>	<b>4,771</b>
BP Amoco PLC Belle Chasse (Alliance).....	38,000	12,300	0	0	0	0	5,289	40	125
Calumet Lubricants Co. LP Princeton.....	0	0	2,000	0	0	7,000	0	5	3
Chalmette Refining LLC Chalmette .....	14,000	14,000	0	2,650	8,000	0	2,250	0	420
Citgo Petroleum Corp. Lake Charles.....	23,000	4,000	0	0	28,000	9,600	21,000	0	616
Conoco Inc. Westlake .....	8,000	0	0	0	0	18,000	18,250	0	750
ExxonMobil Refg & Supply Co. (Formerly Exxon Co. U.S.A.) Baton Rouge.....	35,900	0	0	0	0	16,800	30,195	19	744
Marathon Ashland Petro LLC Garyville.....	30,000	0	42,000	23,000	20,000	0	0	0	504
Motiva Enterprises LLC Convent.....	15,700	0	0	0	12,134	0	0	65	878
Norco .....	16,400	0	0	0	0	0	1,000	60	150
Murphy Oil U.S.A. Inc. Meraux.....	8,500	0	18,000	0	0	0	0	0	120
Orion Refining Corp. Good Hope .....	12,800	0	0	0	0	0	21,307	0	410
Pennzoil - Quaker State Corp. Shreveport .....	4,500	0	600	4,200	0	9,100	0	6	33
Placid Refining Co. Port Allen .....	4,000	0	0	0	0	0	0	0	8
Valero Refining Co. Krotz Springs .....	0	0	0	2,700	800	0	0	0	10
<b>Michigan.....</b>	<b>4,000</b>	<b>0</b>	<b>22,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147</b>
Marathon Ashland Petro LLC Detroit .....	4,000	0	22,000	0	0	0	0	0	147
<b>Minnesota.....</b>	<b>19,000</b>	<b>0</b>	<b>30,000</b>	<b>2,000</b>	<b>22,000</b>	<b>0</b>	<b>18,000</b>	<b>90</b>	<b>903</b>
Koch Petroleum Group Inc. Saint Paul.....	13,000	0	20,000	0	15,000	0	18,000	80	800
Marathon Ashland Petro LLC Saint Paul Park .....	6,000	0	10,000	2,000	7,000	0	0	10	103
<b>Mississippi.....</b>	<b>16,200</b>	<b>21,000</b>	<b>42,700</b>	<b>0</b>	<b>0</b>	<b>8,100</b>	<b>4,800</b>	<b>238</b>	<b>1,300</b>
Chevron U.S.A. Inc. Pascagoula .....	16,200	21,000	20,000	0	0	0	4,800	230	1,300
Ergon Refining Inc. Vicksburg .....	0	0	13,000	0	0	8,100	0	8	0

See footnotes at end of table.

**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Southland Oil Co.									
Lumberton .....	0	0	3,575	0	0	0	0	0	0
Sandersville .....	0	0	6,125	0	0	0	0	0	0
<b>Montana .....</b>	<b>14,900</b>	<b>0</b>	<b>23,700</b>	<b>5,050</b>	<b>700</b>	<b>0</b>	<b>5,775</b>	<b>60</b>	<b>372</b>
Cenex Harvest States Coop									
Laurel .....	3,500	0	12,000	1,250	0	0	0	12	130
Conoco Inc.									
Billings .....	7,200	0	0	3,800	0	0	3,600	20	242
ExxonMobil Refg & Supply Co. (Formerly Exxon Co. U.S.A.)									
Billings .....	3,500	0	10,000	0	0	0	2,175	26	0
Montana Refining Co.									
Great Falls .....	700	0	1,700	0	700	0	0	2	0
<b>Nevada .....</b>	<b>0</b>	<b>0</b>	<b>1,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Foreland Refining Corp.									
Eagle Springs .....	0	0	1,000	0	0	0	0	0	0
<b>New Jersey .....</b>	<b>35,500</b>	<b>7,500</b>	<b>121,900</b>	<b>3,300</b>	<b>10,000</b>	<b>12,000</b>	<b>7,500</b>	<b>20</b>	<b>283</b>
Amerada Hess Corp.									
Port Reading .....	7,000	0	0	0	0	0	0	0	10
Chevron U.S.A. Inc.									
Perth Amboy .....	0	0	35,000	0	0	0	0	0	0
Citgo Asphalt Refining Co.									
Paulsboro .....	0	0	32,400	0	0	0	0	0	0
Coastal Eagle Point Oil Co.									
Westville .....	4,000	7,500	0	0	10,000	0	0	0	15
Tosco Refining Co.									
Linden (Bayway) .....	13,300	0	40,000	3,300	0	0	0	12	100
Valero Refining Co.									
Paulsboro .....	11,200	0	14,500	0	0	12,000	7,500	8	158
<b>New Mexico .....</b>	<b>11,200</b>	<b>0</b>	<b>6,400</b>	<b>0</b>	<b>11,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>
Giant Industries Inc.									
Bloomfield .....	0	0	0	0	0	0	0	0	2
Giant Refining Co.									
Gallup .....	1,800	0	0	0	4,000	0	0	0	2
Navajo Refining Co.									
Artesia .....	9,400	0	6,400	0	7,000	0	0	0	38
<b>North Dakota .....</b>	<b>5,600</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>
BP Amoco PLC									
Mandan .....	5,600	0	0	0	5,000	0	0	0	17
<b>Ohio .....</b>	<b>25,300</b>	<b>11,200</b>	<b>26,500</b>	<b>4,500</b>	<b>22,500</b>	<b>200</b>	<b>12,700</b>	<b>110</b>	<b>524</b>
BP Amoco PLC									
Toledo .....	11,500	0	12,000	0	0	0	8,700	33	300
Clark Refining & Marketing									
Lima .....	0	2,200	2,000	4,500	17,500	0	4,000	29	52
Marathon Ashland Petro LLC									
Canton .....	6,000	0	8,000	0	5,000	0	0	0	110
Sun Co Inc.									
Toledo .....	7,800	9,000	4,500	0	0	200	0	48	62

See footnotes at end of table.



**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
<b>Oklahoma</b> .....	<b>30,250</b>	<b>0</b>	<b>28,852</b>	<b>9,100</b>	<b>17,770</b>	<b>8,800</b>	<b>7,630</b>	<b>44</b>	<b>158</b>
Conoco Inc.									
Ponca City .....	14,500	0	0	8,200	0	0	5,680	11	34
Sinclair Oil Corp.									
Tulsa .....	4,250	0	15,200	0	8,000	0	0	0	28
Sun Co Inc.									
Tulsa .....	0	0	0	900	0	8,800	1,950	0	0
TPI Petroleum Inc.									
Ardmore .....	6,500	0	8,652	0	5,770	0	0	24	96
Wynnewood Refining Co.									
Wynnewood .....	5,000	0	5,000	0	4,000	0	0	9	0
<b>Oregon</b> .....	<b>0</b>	<b>0</b>	<b>7,440</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Chevron U.S.A. Inc.									
Portland (Willbridge) .....	0	0	7,440	0	0	0	0	0	0
<b>Pennsylvania</b> .....	<b>55,300</b>	<b>12,000</b>	<b>20,000</b>	<b>5,000</b>	<b>7,950</b>	<b>6,850</b>	<b>0</b>	<b>11</b>	<b>370</b>
American Refining Group Inc.									
Bradford .....	0	0	0	0	0	2,100	0	0	0
Pennzoil - Quaker State Corp.									
Rouseville .....	0	0	0	0	1,150	4,750	0	4	0
Sun Co Inc.									
Marcus Hook .....	12,000	8,000	0	0	0	0	0	7	0
Sun Refining & Marketing									
Philadelphia .....	26,000	4,000	0	5,000	0	0	0	0	260
Tosco Refining Co.									
Trainer .....	13,200	0	0	0	0	0	0	0	40
United Refining Co.									
Warren .....	4,100	0	20,000	0	6,800	0	0	0	70
<b>Tennessee</b> .....	<b>12,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>
Williams Refining LLC									
Memphis .....	12,000	0	0	0	6,000	0	0	0	43
<b>Texas</b> .....	<b>329,700</b>	<b>182,224</b>	<b>89,900</b>	<b>49,500</b>	<b>129,500</b>	<b>71,460</b>	<b>119,510</b>	<b>867</b>	<b>8,966</b>
Age Refining & Marketing									
San Antonio .....	0	1,200	0	100	0	0	0	0	0
BP Amoco PLC									
Texas City .....	62,000	46,000	0	0	33,000	0	20,400	213	1,200
Chevron U.S.A. Inc.									
El Paso .....	9,000	0	5,600	3,200	0	0	0	0	33
Citgo Refining & Chemical Inc.									
Corpus Christi .....	18,000	17,024	0	0	0	0	13,962	0	300
Clark Refining & Marketing									
Port Arthur .....	16,700	0	0	2,000	0	0	9,000	0	402
Coastal Refining & Marketing Inc.									
Corpus Christi .....	3,000	19,100	20,000	0	5,200	0	6,508	24	185
Crown Central Petroleum Corp.									
Pasadena .....	10,000	0	0	0	5,000	0	1,500	0	22
Deer Park Refg Ltd Ptnrshp									
Deer Park .....	17,200	0	4,700	0	0	12,000	20,610	108	1,105
Diamond Shamrock Refining & Marketing Co.									
Sunray (McKee) .....	10,000	0	10,000	1,500	0	0	0	0	50
Three Rivers .....	7,000	10,500	0	0	0	2,900	0	7	80

See footnotes at end of table.

**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
ExxonMobil Refg & Supply Co. (Formerly Exxon Co. U.S.A.)									
Baytown.....	30,000	0	7,000	0	0	21,000	2,750	147	1,064
(Formerly Mobil Oil Corp.)									
Beaumont.....	16,000	11,700	0	11,200	23,000	12,000	13,780	54	560
Fina Oil & Chemical Co.									
Big Spring.....	5,000	1,000	7,600	0	0	0	0	0	130
Port Arthur.....	5,900	13,600	4,000	0	9,800	0	0	0	300
Koch Petroleum Group Inc.									
Corpus Christi .....	13,000	26,000	0	0	10,000	0	2,800	0	235
La Gloria Oil & Gas Co.									
Tyler.....	4,700	0	0	500	0	0	1,500	0	15
Lyondell Citgo Refining Co. Ltd.									
Houston.....	11,500	10,700	0	0	0	4,060	23,500	0	720
Marathon Ashland Petro LLC									
Texas City.....	10,000	2,500	0	0	0	0	0	0	0
Motiva Enterprises LLC									
Port Arthur.....	20,000	0	0	0	0	19,500	3,200	0	780
Neste Trifinery Petro Serve									
Corpus Christi .....	0	0	16,000	0	0	0	0	0	0
Phillips 66 Co.									
Borger.....	14,000	0	0	11,000	18,000	0	0	68	340
Sweeny.....	15,200	5,300	0	0	9,000	0	0	105	375
South Hampton Refining Co.									
Silsbee.....	0	600	0	0	1,000	0	0	1	0
Valero Refining Co.									
Corpus Christi .....	13,000	17,000	15,000	20,000	10,000	0	0	140	460
Houston.....	11,000	0	0	0	0	0	0	0	110
Texas City.....	7,500	0	0	0	5,500	0	0	0	500
<b>Utah .....</b>	<b>15,050</b>	<b>0</b>	<b>1,700</b>	<b>2,700</b>	<b>4,300</b>	<b>0</b>	<b>380</b>	<b>0</b>	<b>54</b>
BP Amoco PLC									
Salt Lake City .....	5,800	0	0	0	0	0	0	0	19
Big West Oil Co.									
North Salt Lake.....	1,400	0	0	1,400	1,700	0	0	0	4
Chevron U.S.A. Inc.									
Salt Lake City .....	5,600	0	0	1,300	0	0	380	0	21
Phillips 66 Co.									
Woods Cross.....	2,250	0	1,700	0	2,600	0	0	0	10
<b>Virginia .....</b>	<b>4,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,300</b>	<b>0</b>	<b>39</b>
BP Amoco PLC									
Yorktown.....	4,200	0	0	0	0	0	3,300	0	39
<b>Washington .....</b>	<b>29,400</b>	<b>0</b>	<b>15,200</b>	<b>12,900</b>	<b>5,800</b>	<b>0</b>	<b>7,674</b>	<b>96</b>	<b>434</b>
Arco Products Co.									
Ferndale (Cherry Point).....	0	0	0	5,000	0	0	6,177	96	220
Chevron U.S.A. Inc.									
Richmond Beach.....	0	0	4,200	0	0	0	0	0	0
Equilon Enterprises LLC									
Anacortes.....	10,400	0	0	0	0	0	1,497	0	155
Tesoro Northwest Co.									
Anacortes.....	12,400	0	3,000	3,600	0	0	0	0	0
Tosco Refining Co.									
Ferndale.....	6,600	0	0	4,300	0	0	0	0	49
U.S. Oil & Refining Co.									
Tacoma.....	0	0	8,000	0	5,800	0	0	0	10

See footnotes at end of table.

**Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 2000 (Continued)**  
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
<b>West Virginia.....</b>	<b>0</b>	<b>0</b>	<b>283</b>	<b>0</b>	<b>0</b>	<b>4,068</b>	<b>0</b>	<b>1</b>	<b>1</b>
Ergon West Virginia Inc.									
Newell (Congo) .....	0	0	283	0	0	4,068	0	1	1
<b>Wisconsin.....</b>	<b>1,500</b>	<b>0</b>	<b>7,500</b>	<b>0</b>	<b>2,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>
Murphy Oil U.S.A. Inc.									
Superior .....	1,500	0	7,500	0	2,000	0	0	0	12
<b>Wyoming.....</b>	<b>9,277</b>	<b>0</b>	<b>19,400</b>	<b>0</b>	<b>1,000</b>	<b>0</b>	<b>2,500</b>	<b>32</b>	<b>122</b>
Frontier Refg Inc.									
Cheyenne.....	4,200	0	10,000	0	0	0	2,500	6	80
Little America Refining Co.									
Evansville (Casper) .....	0	0	4,400	0	0	0	0	0	0
Silver Eagle Refining									
Evanston .....	0	0	0	0	1,000	0	0	0	0
Sinclair Oil Corp.									
Sinclair .....	4,500	0	5,000	0	0	0	0	26	40
Wyoming Refining Co.									
Newcastle .....	577	0	0	0	0	0	0	0	2
<b>U.S. Total .....</b>	<b>1,184,977</b>	<b>315,124</b>	<b>885,922</b>	<b>159,946</b>	<b>482,654</b>	<b>217,878</b>	<b>463,980</b>	<b>3,143</b>	<b>26,645</b>
<b>Puerto Rico.....</b>	<b>0</b>	<b>19,200</b>	<b>1,000</b>	<b>0</b>	<b>0</b>	<b>9,200</b>	<b>0</b>	<b>19</b>	<b>83</b>
Caribbean Petroleum Corp.									
Bayamon .....	0	0	1,000	0	0	0	0	0	33
Phillips Puerto Rico Core Inc.									
Guayama .....	0	19,200	0	0	0	0	0	0	0
Sun Co Inc.									
Yabucoa .....	0	0	0	0	0	9,200	0	19	50
<b>Virgin Islands .....</b>	<b>20,000</b>	<b>20,000</b>	<b>0</b>	<b>0</b>	<b>18,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600</b>
Hovensa LLC									
Kingshill (St Croix) .....	20,000	20,000	0	0	18,000	0	0	0	600

MMcfd = Million cubic feet per day.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."



Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 2000

Refiner	Barrels per Calendar Day	Refiner	Barrels per Calendar Day
<b>Companies with Capacity Over 100,000 bbl/cd</b>			
EXXON MOBIL CORP.....	1,912,900	EQUILON ENTERPRISES LLC.....	748,000
ExxonMobil Refg & Supply Co		Wood River, Illinois.....	288,300
Baytown, Texas <sup>a</sup> .....	505,000	Martinez, California.....	156,200
Baton Rouge, Louisiana <sup>a</sup> .....	483,000	Anacortes, Washington.....	142,000
Beaumont, Texas <sup>b</sup> .....	348,400	Wilmington, California.....	96,500
Joliet, Illinois <sup>b</sup> .....	240,000	Bakersfield, California.....	65,000
Torrance, California <sup>b</sup> .....	149,000	SUN CO INC.....	724,000
Benicia, California <sup>a</sup> .....	129,500	Sun Co Inc.	
Billings, Montana <sup>a</sup> .....	58,000	Marcus Hook, Pennsylvania.....	175,000
		Toledo, Ohio.....	134,000
		Tulsa, Oklahoma.....	85,000
BP AMOCO PLC.....	1,429,500	Sun Refining & Marketing	
Texas City, Texas.....	437,000	Philadelphia, Pennsylvania.....	330,000
Whiting, Indiana.....	410,000		
Belle Chasse (Alliance), Louisiana.....	250,000	PDV AMERICA INC.....	705,700
Toledo, Ohio.....	157,000	Citgo Petroleum Corp.	
Yorktown, Virginia.....	59,500	Lake Charles, Louisiana.....	317,000
Mandan, North Dakota.....	58,000	PDV Midwest Refining LLC	
Salt Lake City, Utah.....	58,000	Lemont (Chicago), Illinois.....	164,700
CHEVRON CORP.....	1,049,000	Citgo Refining & Chemical Inc.	
Chevron U.S.A. Inc.		Corpus Christi, Texas.....	156,000
Pascagoula, Mississippi.....	295,000	Citgo Asphalt Refining Co.	
El Segundo, California.....	260,000	Paulsboro, New Jersey.....	40,000
Richmond, California.....	225,000	Savannah, Georgia.....	28,000
El Paso, Texas.....	90,000		
Perth Amboy, New Jersey.....	80,000	KOCH INDUS INC.....	557,000
Honolulu, Hawaii.....	54,000	Koch Petroleum Group Inc.	
Salt Lake City, Utah.....	45,000	Corpus Christi, Texas.....	297,000
		Saint Paul, Minnesota.....	260,000
USX CORP.....	935,000		
Marathon Ashland Petro LLC		E I DUPONT DE NEMOURS.....	523,000
Garyville, Louisiana.....	232,000	Conoco Inc.	
Catlettsburg, Kentucky.....	222,000	Westlake, Louisiana.....	240,000
Robinson, Illinois.....	192,000	Ponca City, Oklahoma.....	174,000
Detroit, Michigan.....	74,000	Commerce City, Colorado.....	57,500
Canton, Ohio.....	73,000	Billings, Montana.....	51,500
Texas City, Texas.....	72,000		
Saint Paul Park, Minnesota.....	70,000	BLACKSTONE GROUP LP.....	518,015
TOSCO CORP.....	920,000	Clark Refining & Marketing	
Tosco Refining Co.		Port Arthur, Texas.....	212,000
Linden (Bayway), New Jersey.....	250,000	Lima, Ohio.....	161,500
Trainer, Pennsylvania.....	180,000	Blue Island, Illinois.....	80,515
Martinez (Avon), California.....	156,000	Hartford, Illinois.....	64,000
Wilmington, California.....	130,500	ATLANTIC RICHFIELD CO.....	511,720
Ferndale, Washington.....	88,500	Arco Products Co.	
Rodeo, California.....	73,200	Los Angeles, California.....	260,000
Arroyo Grande, California.....	41,800	Ferndale (Cherry Point), Washington.....	222,720
MOTIVA ENTERPRISES LLC.....	852,400	Arco Alaska Inc.	
Port Arthur, Texas.....	238,000	Prudhoe Bay, Alaska.....	15,000
Convent, Louisiana.....	232,400	Kuparuk (Anchorage), Alaska.....	14,000
Norco, Louisiana.....	225,000		
Delaware City, Delaware.....	157,000		

See footnotes at end of table.

**Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 2000**  
(Continued)

Refiner	Barrels per Calendar Day	Refiner	Barrels per Calendar Day
VALERO ENERGY CORP.....	493,500	FINA OIL & CHEMICAL CO.....	237,000
Valero Refining Co.		Fina Oil & Chemical Co.	
Paulsboro, New Jersey.....	155,000	Port Arthur, Texas.....	178,500
Texas City, Texas.....	152,000	Big Spring, Texas.....	58,500
Krotz Springs, Louisiana.....	78,000		
Houston, Texas.....	72,500	CENEX HARVEST STATES COOP.....	234,990
Corpus Christi, Texas.....	36,000	Cooperative Rfng LLC	
ULTRAMAR DIAMOND SHAMROCK CORP.....	418,689	Coffeyville, Kansas <sup>c</sup> .....	112,000
Diamond Shamrock Refining & Marketing Co.		McPherson, Kansas <sup>d</sup> .....	77,400
Sunray (McKee), Texas.....	145,900	Cenex Harvest States Coop	
Three Rivers, Texas.....	90,000	Laurel, Montana.....	45,590
Ultramar Refining			
Wilmington, California.....	78,800	CHALMETTE REFINING LLC	
TPI Petroleum Inc.		Chalmette, Louisiana.....	190,080
Ardmore, Oklahoma.....	76,989		
Colorado Refining Co.		ORION REFINING CORP	
Commerce City, Colorado.....	27,000	Orion Refining Corp.	
WILLIAMS CO, THE.....	366,550	Good Hope, Louisiana.....	155,000
Williams Alaska Petro Inc.			
North Pole, Alaska.....	206,550	CROWN CENTRAL PETRO CORP.....	155,000
Williams Refining LLC		Crown Central Petroleum Corp.	
Memphis, Tennessee.....	160,000	Pasadena, Texas.....	100,000
PHILLIPS PETRO CO.....	355,000	La Gloria Oil & Gas Co.	
Phillips 66 Co.		Tyler, Texas.....	55,000
Sweeny, Texas.....	205,000		
Borger, Texas.....	125,000	SINCLAIR OIL CORP.....	149,000
Woods Cross, Utah.....	25,000	Sinclair Oil Corp.	
DEER PARK REFG LTD PTNRSHIP		Tulsa, Oklahoma.....	68,500
Deer Park, Texas.....	274,200	Sinclair, Wyoming.....	56,000
		Little America Refining Co.	
TESORO PETRO CORP.....	273,000	Evansville (Casper), Wyoming.....	24,500
Tesoro Northwest Co.			
Anacortes, Washington.....	107,500	FRONTIER OIL CORP.....	143,670
Tesoro Hawaii Corp.		Frontier El Dorado Refg Co.	
Ewa Beach, Hawaii.....	93,500	El Dorado, Kansas <sup>e</sup> .....	105,000
Tesoro Petroleum Corp.		Frontier Refg Inc.	
Kenai, Alaska.....	72,000	Cheyenne, Wyoming <sup>f</sup> .....	38,670
LYONDELL PETROCHEM CO			
Lyondell Citgo Refining Co. Ltd.		SHELL OIL CO.....	135,000
Houston, Texas.....	262,650	Shell Chemical	
COASTAL CORP, THE.....	257,500	Saraland (Mobile), Alabama.....	80,000
Coastal Eagle Point Oil Co.		Saint Rose, Louisiana.....	55,000
Westville, New Jersey.....	143,000		
Coastal Refining & Marketing Inc.		MURPHY OIL CORP.....	128,000
Corpus Christi, Texas.....	98,000	Murphy Oil U.S.A. Inc.	
Coastal Mobile Refining Co.		Meraux, Louisiana.....	95,000
Chickasaw, Alabama.....	16,500	Superior, Wisconsin.....	33,000
		<b>Total.....</b>	<b>15,615,064</b>

See footnotes at end of table.



**Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 2000**  
(Continued)

Refiner	Barrels per Calendar Day	Refiner	Barrels per Calendar Day
<b>Companies with Capacity 30,001 to 100,000 bbl/cd</b>		ERGON INC .....	37,300
		Ergon Refining Inc.	
		Vicksburg, Mississippi .....	24,000
		Ergon West Virginia Inc.	
		Newell (Congo), West Virginia .....	13,300
HOLLY CORP .....	65,000		
Navajo Refining Co.			
Artesia, New Mexico .....	58,000		
Montana Refining Co.		HUNT CONSLD INC	
Great Falls, Montana .....	7,000	Hunt Refining Co.	
		Tuscaloosa, Alabama .....	33,500
UNITED REFINING INC			
United Refining Co.		<b>Total .....</b>	<b>588,400</b>
Warren, Pennsylvania .....	65,000		
		<b>Companies with Capacity 10,001 to 30,000 bbl/cd</b>	
PENNZOIL - QUAKER STATE CORP .....	59,000	NESTE TRIFINERY PETRO SERVE	
Pennzoil - Quaker State Corp.		Corpus Christi, Texas .....	27,000
Shreveport, Louisiana .....	46,200		
Rouseville, Pennsylvania .....	12,800		
LION OIL CO		APEX OIL CO INC	
Lion Oil Co.		Petroleum Fuel & Terminal	
El Dorado, Arkansas .....	54,000	Long Beach, California .....	26,000
PETRO STAR INC .....	52,000		
Petro Star Inc.		SAN JOAQUIN REFINING CO INC	
Valdez, Alaska .....	38,000	San Joaquin Refining Co Inc.	
North Pole, Alaska .....	14,000	Bakersfield, California .....	24,300
GARY WILLIAMS CO		FLYING J INC	
Wynnewood Refining Co.		Big West Oil Co.	
Wynnewood, Oklahoma .....	50,000	North Salt Lake, Utah .....	24,000
PLACID REFINING CO		KERN OIL & REFINING CO	
Placid Refining Co.		Kern Oil & Refining Co.	
Port Allen, Louisiana .....	48,500	Bakersfield, California .....	24,000
PARAMOUNT ACQUISITION CORP		COUNTRYMARK COOPERATIVE INC	
Paramount Petroleum Corp.		Countrymark Cooperative Inc.	
Paramount, California .....	46,500	Mount Vernon, Indiana .....	23,000
TIME OIL CO		HUNTWAY REFINING CO .....	18,100
U.S. Oil & Refining Co.		Huntway Refining Co.	
Tacoma, Washington .....	40,000	Benicia, California .....	12,600
		Wilmington, California .....	5,500
GIANT INDUS INC .....	37,600		
Giant Refining Co.		SOUTHLAND OIL CO .....	16,800
Gallup, New Mexico .....	20,800	Southland Oil Co.	
Giant Industries Inc.		Sandersville, Mississippi .....	11,000
Bloomfield, New Mexico .....	16,800	Lumberton, Mississippi .....	5,800

See footnotes at end of table.



**Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 2000**  
(Continued)

Refiner	Barrels per Calendar Day	Refiner	Barrels per Calendar Day
CALUMET LUBRICANTS CO LP .....	16,100	MARTIN GAS SALES INC	
Calumet Lubricants Co. LP		Berry Petroleum Co.	
Princeton, Louisiana.....	8,300	Stephens, Arkansas .....	6,700
Cotton Valley, Louisiana .....	7,800		
TRANSWORLD OIL USA INC		CROSS OIL & REFINING CO INC	
Calcasieu Refining Co.		Cross Oil & Refining Co. Inc.	
Lake Charles, Louisiana.....	15,300	Smackover, Arkansas .....	6,212
<b>Total.....</b>	<b>214,600</b>	SOMERSET REFINERY INC	
		Somerset Refinery Inc.	
		Somerset, Kentucky .....	5,500
<b>Companies with Capacity</b>			
<b>10,000 bbl/cd or Less</b>		YOUNG REFINING CORP	
INLAND RESOURCES INC		Young Refining Corp.	
Inland Refining Inc.		Douglasville, Georgia .....	5,400
Woods Cross, Utah .....	10,000	FORELAND REFINING CORP	
AMERICAN REFINING GROUP INC		Foreland Refining Corp.	
American Refining Group Inc.		Eagle Springs, Nevada.....	5,000
Bradford, Pennsylvania .....	10,000	OIL HOLDING INC	
WYOMING REFINING CO		Tenby Inc.	
Wyoming Refining Co.		Oxnard, California .....	4,000
Newcastle, Wyoming .....	9,995	SILVER EAGLE REFINING	
GREKA ENERGY		Evanston, Wyoming.....	3,000
Santa Maria, California <sup>a</sup> .....	9,500	SPECIFIED FUELS & CHEMLS LLC	
AGE REFINING & MARKETING		Channelview, Texas .....	1,400
San Antonio, Texas.....	9,000	<b>Total .....</b>	<b>93,807</b>
WORLD OIL CO		<b>U.S. Total.....</b>	<b>16,511,871</b>
Lunday Thagard			
South Gate, California .....	8,100		

<sup>a</sup> Formerly Exxon Corp.

<sup>b</sup> Formerly Mobil Oil Corp.

<sup>c</sup> Formerly Farmland Industries Inc. CRA

<sup>d</sup> Formerly National Cooperative Refinery Assoc.

<sup>e</sup> Formerly Equilon Enterprises LLC

<sup>f</sup> Formerly Wainoco Oil Corp.

<sup>g</sup> Formerly Saba Petro Inc.

Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

**Table 41. Operable Crude Oil and Downstream Charge Capacity of Petroleum Refineries, January 1, 1981 to January 1, 2000**

(Thousand Barrels per Stream Day, Except Where Noted)

Year/PAD District	Atmospheric Crude Oil Distillation	Downstream Charge Capacity							
		Vacuum Distillation	Thermal Cracking	Catalytic Cracking		Catalytic Hydro-cracking	Catalytic Reforming	Catalytic Hydro-treating	Fuels Solvent Deasphalting
				Fresh	Recycled				
JAN 1, 1981	19,763	7,033	1,587	5,543	594	909	4,098	8,487	NA
JAN 1, 1982	19,018	7,197	1,782	5,474	562	892	3,966	8,539	NA
JAN 1, 1983	17,871	7,180	1,715	5,402	488	883	3,918	8,354	NA
JAN 1, 1984	17,059	7,165	1,852	5,310	492	952	3,907	9,009	NA
JAN 1, 1985	16,504	6,998	1,858	5,232	507	1,053	3,750	8,897	NA
JAN 1, 1986	16,346	6,892	1,880	5,214	463	1,125	3,744	8,791	NA
JAN 1, 1987	16,460	6,935	1,928	5,251	466	1,189	3,805	9,083	230
JAN 1, 1988	16,825	7,198	2,080	5,424	381	1,202	3,891	9,170	240
JAN 1, 1989	16,568	7,225	2,073	5,324	326	1,238	3,911	9,440	245
JAN 1, 1990	16,507	7,245	2,108	5,441	314	1,282	3,896	9,537	279
JAN 1, 1991	16,557	7,276	2,158	5,559	304	1,308	3,926	9,676	271
JAN 1, 1992	16,633	7,172	2,100	5,608	280	1,363	3,907	9,644	276
JAN 1, 1993	15,935	6,892	2,082	5,540	244	1,397	3,728	9,677	269
JAN 1, 1994	15,904	6,892	2,107	5,586	191	1,376	3,875	10,616	261
JAN 1, 1995	16,326	7,248	2,123	5,583	169	1,386	3,867	10,916	251
JAN 1, 1997	16,287	7,349	2,050	5,595	155	1,388	3,727	11,041	275
JAN 1, 1999	17,155	7,538	2,046	5,920	153	1,552	3,779	11,461	318
JAN 1, 2000	17,393	7,617	2,163	5,949	99	1,576	3,770	11,440	351
PADD I	1,793	735	92	731	8	42	322	1,011	22
PADD II	3,791	1,522	384	1,281	14	157	895	2,534	31
PADD III	7,984	3,579	1,034	2,935	52	774	1,838	5,506	221
PADD IV	572	224	43	182	11	17	124	361	9
PADD V	3,253	1,555	611	821	14	587	592	2,028	68
JAN 1, 2001	17,515	7,750	2,272	5,964	99	1,618	3,795	11,505	351
PADD I	1,776	731	92	731	8	42	317	1,007	22
PADD II	3,791	1,522	390	1,281	14	157	915	2,575	31
PADD III	8,125	3,712	1,134	2,950	52	816	1,847	5,533	221
PADD IV	572	224	43	182	11	17	124	361	9
PADD V	3,251	1,561	614	821	14	587	592	2,028	68
2000-2001 (Net Change)	122	134	109	16	0	42	25	65	0
PADD I	-17	-5	0	0	0	0	-5	-4	0
PADD II	0	0	6	0	0	0	20	41	0
PADD III	140	133	101	16	0	42	10	28	0
PADD IV	0	0	0	0	0	0	0	0	0
PADD V	-2	5	3	0	0	0	0	0	0

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report." See Explanatory Note 3 for details.

**Table 42. Operable Production Capacity of Petroleum Refineries, January 1, 1981 to January 1, 2000**  
(Thousand Barrels per Stream Day, Except Where Noted)

Year/PAD District	Production Capacity							
	Alkylates	Aromatics	Asphalt and Road Oil	Isomers	Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons/day)
JAN 1, 1981	974	299	765	131	234	276	2,054	NA
JAN 1, 1982	984	290	740	162	242	267	1,944	NA
JAN 1, 1983	960	237	722	212	241	296	2,298	NA
JAN 1, 1984	945	218	800	208	241	407	2,444	NA
JAN 1, 1985	917	215	767	219	243	424	2,572	NA
JAN 1, 1986	941	276	804	258	246	356	2,357	NA
JAN 1, 1987	974	287	788	326	250	364	2,569	23,806
JAN 1, 1988	993	289	788	465	232	368	2,418	27,639
JAN 1, 1989	1,015	290	823	469	230	333	2,501	28,369
JAN 1, 1990	1,030	290	844	456	232	341	2,607	24,202
JAN 1, 1991	1,077	292	866	490	229	367	2,527	23,875
JAN 1, 1992	1,095	290	812	494	217	356	2,644	23,811
JAN 1, 1993	1,083	286	814	499	217	393	2,674	25,940
JAN 1, 1994	1,086	278	793	499	213	410	2,940	24,554
JAN 1, 1995	1,105	285	846	502	217	427	3,139	24,885
JAN 1, 1997	1,120	288	872	577	244	458	3,052	26,466
JAN 1, 1999	1,172	302	846	667	233	441	3,104	26,423
JAN 1, 2000	1,185	315	886	643	218	464	3,143	26,645
PADD I	104	21	169	26	23	20	94	1,289
PADD II	271	56	308	179	18	99	380	4,937
PADD III	573	234	235	301	145	226	1,309	15,279
PADD IV	39	0	54	15	0	9	92	646
PADD V	198	4	120	122	32	111	1,268	4,494
JAN 1, 2001	1,187	323	901	638	217	483	3,203	27,346
PADD I	104	21	169	25	19	20	109	1,470
PADD II	271	56	308	174	18	101	380	4,937
PADD III	574	242	237	303	148	244	1,354	15,797
PADD IV	40	0	54	15	0	9	92	648
PADD V	198	4	133	122	32	111	1,268	4,494
2000-2001 (Net Change)	2	8	15	-4	-1	19	60	701
PADD I	0	0	(s)	-1	-4	0	15	181
PADD II	0	0	0	-5	0	2	0	0
PADD III	1	8	2	2	3	17	45	518
PADD IV	1	0	0	0	0	0	0	2
PADD V	0	0	13	0	0	0	0	0

NA = Not available. MMcfd = Million cubic feet per day.

(s) = Less than 500 barrels per stream day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report." See Explanatory Note 3 for details.



**Table 43. Working Storage Capacity<sup>a</sup> at Operable Refineries by PAD District  
as of January 1, 2000  
(Thousand Barrels)**

Commodity	PAD Districts					United States
	I	II	III	IV	V	
Crude Oil .....	24,450	22,461	74,850	3,631	34,423	159,815
Liquefied Petroleum Products .....	3,401	8,198	16,459	501	1,908	30,467
Propane/Propylene .....	899	4,474	7,018	168	231	12,790
Normal Butane/Butylene .....	2,502	3,724	9,441	333	1,677	17,677
Other Liquids .....	10,795	14,281	32,332	3,424	17,407	78,239
Oxygenates .....	2,558	511	3,352	124	3,128	9,673
Fuel Ethanol .....	0	81	28	111	1	221
Methanol .....	561	3	591	0	142	1,297
MTBE .....	1,897	427	2,581	12	2,961	7,878
Other Oxygenates <sup>b</sup> .....	100	0	152	1	24	277
Gasoline Blending Components .....	8,237	13,770	28,980	3,300	14,279	68,566
Petroleum Products .....	55,663	83,578	199,416	16,835	80,743	436,235
Finished Motor Gasoline .....	11,071	17,709	28,111	3,858	13,238	73,987
Reformulated .....	6,706	1,552	5,819	0	7,377	21,454
Oxygenated .....	171	493	0	295	69	1,028
Other Finished .....	4,194	15,664	22,292	3,563	5,792	51,505
Jet Fuel .....	2,665	3,822	11,265	894	6,666	25,312
Naphtha-Type .....	0	24	86	95	82	287
Kerosene-Type .....	2,665	3,798	11,179	799	6,584	25,025
Kerosene .....	373	817	1,801	166	308	3,465
Distillate Fuel Oil .....	10,852	16,299	26,739	3,064	9,458	66,412
0.05 percent sulfur and under .....	3,759	10,575	14,839	2,245	6,503	37,921
Greater than 0.05 percent sulfur .....	7,093	5,724	11,900	819	2,955	28,491
Residual Fuel Oil .....	3,651	3,433	11,137	802	7,143	26,166
Lubricants .....	2,598	773	14,112	0	2,706	20,189
Asphalt and Road Oil .....	3,804	11,012	6,593	3,637	4,015	29,061
Other Products <sup>c</sup> .....	20,649	29,713	99,658	4,414	37,209	191,643
<b>Total .....</b>	<b>94,309</b>	<b>128,518</b>	<b>323,057</b>	<b>24,391</b>	<b>134,481</b>	<b>704,756</b>

<sup>a</sup> The difference in volume between the maximum safe fill capacity and tank bottoms.

<sup>b</sup> Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

<sup>c</sup> Includes ethane/ethylene, isobutane/isobutylene, pentanes plus, other hydrocarbons/hydrogen, unfinished oils, finished aviation gasoline, special naphthas, wax, petroleum coke, still gas, petrochemical feedstocks and miscellaneous products.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."

**Table 44. Shell Storage Capacity<sup>a</sup> at Operable Refineries by PAD District  
as of January 1, 2000  
(Thousand Barrels)**

Commodity	PAD Districts					United States
	I	II	III	IV	V	
Crude Oil .....	28,248	26,438	87,871	4,117	38,305	184,979
Liquefied Petroleum Products.....	3,788	9,184	17,126	537	2,091	32,726
Propane/Propylene .....	997	5,140	7,393	180	253	13,963
Normal Butane/Butylene .....	2,791	4,044	9,733	357	1,838	18,763
Other Liquids .....	12,400	26,007	38,098	3,813	19,651	99,969
Oxygenates .....	2,859	577	4,039	145	3,531	11,151
Fuel Ethanol .....	0	99	31	130	1	261
Methanol.....	593	4	689	0	167	1,453
MTBE .....	2,156	474	3,137	13	3,336	9,116
Other Oxygenates <sup>b</sup> .....	110	0	182	2	27	321
Gasoline Blending Components.....	9,541	25,430	34,059	3,668	16,120	88,818
Petroleum Products.....	62,025	94,212	225,391	18,606	90,346	490,580
Finished Motor Gasoline.....	12,614	20,122	32,623	4,349	15,295	85,003
Reformulated .....	7,664	1,827	6,743	0	8,593	24,827
Oxygenated .....	185	566	1	347	90	1,189
Other Finished .....	4,765	17,729	25,879	4,002	6,612	58,987
Jet Fuel.....	2,927	4,254	12,663	987	7,448	28,279
Naphtha-Type .....	0	26	91	114	93	324
Kerosene-Type.....	2,927	4,228	12,572	873	7,355	27,955
Kerosene .....	393	920	1,984	181	363	3,841
Distillate Fuel Oil.....	11,895	17,809	29,883	3,345	10,593	73,525
0.05 percent sulfur and under.....	4,041	11,609	16,533	2,427	7,300	41,910
Greater than 0.05 percent sulfur.....	7,854	6,200	13,350	918	3,293	31,615
Residual Fuel Oil .....	4,004	3,989	12,604	889	7,870	29,356
Lubricants.....	2,728	836	15,402	0	2,835	21,801
Asphalt and Road Oil .....	4,175	12,162	7,361	4,056	4,286	32,040
Other Products <sup>c</sup> .....	23,289	34,120	112,871	4,799	41,656	216,735
<b>Total .....</b>	<b>106,461</b>	<b>155,841</b>	<b>368,486</b>	<b>27,073</b>	<b>150,393</b>	<b>808,254</b>

<sup>a</sup> The design capacity of the tank.

<sup>b</sup> Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

<sup>c</sup> Includes ethane/ethylene, isobutane/isobutylene, pentanes plus, other hydrocarbons/hydrogen, unfinished oils, finished aviation gasoline, special naphthas, wax, petroleum coke, still gas, petrochemical feedstocks and miscellaneous products.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."

**Table 45. Capacity and Fresh Feed Input to Selected Downstream Units at U.S. Refineries, 1998-2000**  
(Barrels per Calendar Day, Except Where Noted)

PAD District/Item	1998	1999	2000	1998	1999	2000
	PAD DISTRICT I			PAD DISTRICT II		
Cokers						
Capacity .....	NA	83,400	81,250	NA	321,300	368,122
Inputs .....	77,805	80,948	—	319,748	320,186	—
Catalytic Crackers						
Capacity .....	NA	675,400	671,750	NA	1,225,590	1,213,261
Inputs .....	641,403	645,918	—	1,107,874	1,114,896	—
Hydrocrackers						
Capacity .....	NA	38,000	38,000	NA	138,600	143,100
Inputs .....	53,088	38,074	—	138,879	141,052	—
	PAD DISTRICT III			PAD DISTRICT IV		
Cokers						
Capacity .....	NA	883,688	923,200	NA	36,400	36,900
Inputs .....	817,233	857,096	—	40,553	38,904	—
Catalytic Crackers						
Capacity .....	NA	2,653,814	2,770,672	NA	169,395	170,515
Inputs .....	2,507,071	2,547,499	—	147,414	144,652	—
Hydrocrackers						
Capacity .....	NA	710,600	703,660	NA	4,500	11,000
Inputs .....	512,389	500,241	—	3,756	4,589	—
	PAD DISTRICT V			U.S. TOTAL		
Cokers						
Capacity .....	NA	529,400	552,520	NA	1,854,188	1,961,992
Inputs .....	496,814	460,605	—	1,752,153	1,757,740	—
Catalytic Crackers						
Capacity .....	NA	818,900	772,800	NA	5,543,099	5,598,998
Inputs .....	719,244	684,529	—	5,123,005	5,137,493	—
Hydrocrackers						
Capacity .....	NA	458,175	509,645	NA	1,349,875	1,405,405
Inputs .....	425,841	412,636	—	1,133,953	1,112,241	—

NA=Not available; the Form EIA-820 data were not collected for January 1, 1998.

Note: Capacities are as of January 1 of the indicated year.

Sources: Capacities are from the Energy Information Administration Form EIA-820, "Annual Refinery Report." See Explanatory Note 3 for details. Inputs are from the Energy Information Administration Form EIA-810, "Monthly Refinery Report."



**Table 46. Refinery Receipts of Crude Oil by Method of Transportation by PAD District, 1999**  
(Thousand Barrels)

Method	PAD Districts					United States
	I	II	III	IV	V	
Pipeline						
Domestic .....	1,946	589,276	719,569	111,509	345,943	1,768,243
Foreign .....	23,462	619,466	277,925	58,451	30,698	1,010,002
Tanker						
Domestic .....	0	0	434	0	337,219	337,653
Foreign .....	505,704	0	1,444,087	0	178,626	2,128,417
Barge						
Domestic .....	1,089	208	61,182	0	1,782	64,261
Foreign .....	24,635	0	34,808	0	12,624	72,067
Tank Cars						
Domestic .....	4,129	0	1,502	0	2,787	8,418
Foreign .....	0	0	0	0	0	0
Trucks						
Domestic .....	4,194	9,161	22,634	11,750	10,101	57,840
Foreign .....	0	0	0	0	0	0
Total						
Domestic .....	11,358	598,645	805,321	123,259	697,832	2,236,415
Foreign .....	553,801	619,466	1,756,820	58,451	221,948	3,210,486

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."

**Table 47. Fuel Consumed at Refineries by PAD District, 1999**  
(Thousand Barrels, Except Where Noted)

Commodity	PAD Districts					United States
	I	II	III	IV	V	
1999						
Crude Oil .....	0	0	10	0	0	10
Liquefied Petroleum Gases .....	174	1,706	790	40	1,173	3,883
Distillate Fuel Oil .....	128	62	119	6	257	572
Residual Fuel Oil .....	2,328	2,738	12	217	567	5,862
Still Gas .....	20,371	48,222	114,011	7,287	45,792	235,683
Marketable Petroleum Coke .....	1,388	185	88	166	781	2,608
Catalyst Petroleum Coke .....	11,530	18,494	41,565	2,628	12,537	86,754
Natural Gas (million cubic feet) .....	40,616	92,936	521,537	21,701	122,733	799,523
Coal (thousand short tons) .....	W	W	W	W	W	W
Purchased Electricity (million kWh) .....	3,180	8,956	13,762	1,422	5,389	32,709
Purchased Steam (million pounds) .....	3,525	2,783	19,771	935	18,670	45,684
Hydrogen (million cubic feet) .....	0	0	0	0	0	0
Other Products <sup>a</sup> .....	438	1,419	1,961	718	1,626	6,162

Note: Includes volumes used as fuel at refineries and all nonprocessing losses of crude oil and petroleum products (e.g., spills, fire losses, contamination, etc.)

<sup>a</sup> Includes pentanes plus, other hydrocarbons, oxygenates, unfinished oils, gasoline, special naphthas, jet fuel, lubricants, asphalt, road oil, and miscellaneous products.

W = Withheld to avoid disclosure of individual company data.

Source: Form EIA-820, "Annual Refinery Report" and Form EIA-810, "Monthly Refinery Report".

Table 48. Shutdown and Reactivated Refineries During 1999

PAD District / Refinery	Location	Total Atmospheric Crude Oil Distillation Capacity (bbl/cd)	Total Downstream Charge Capacity (bbl/sd)	Date Operable	Date of Last Operation	Date Shutdown
SHUTDOWNS						
PAD District II		51,000	63,300			
TPI Petro. Inc.	Alma, MI	51,000	63,300	01/48	11/99	12/99
Total U.S. Shutdowns		51,000	63,300			
REACTIVATIONS						
PAD District VI		42,000	46,300			
Caribbean Petroleum	Bayamon, PR	42,000	46,300	05/99	—	—

bbl/cd=Barrels per calendar day.

bbl/sd=Barrels per stream day.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and Form EIA-820, "Annual Refinery Report."



Table 49. Refinery Sales During 1999

Former Owner	Total Atmospheric Crude Oil Distillation Capacity (bbl/cd)	New Owner	Date of Sale
<b>Equilon Enterprises LLC</b> El Dorado, KS.....	105,000	<b>Frontier Oil Corp.</b>	11/99
<b>Exxon Co. U.S.A.</b> Baton Rouge, LA..... Baytown, TX..... Benicia, CA..... Billings, MT.....	483,000 505,000 129,500 58,000	<b>Exxon Mobil Corp.</b>	11/99
<b>Farmland Indus Inc CRA</b> Coffeyville, KS.....	112,000	<b>Cenex Harvest States Coop.</b>	09/99
<b>Mobil Oil Corp</b> Beaumont, TX..... Joliet, IL..... Torrance, CA.....	348,400 240,000 149,000	<b>Exxon Mobil Corp.</b>	11/99
<b>Saba Petro Inc</b> Santa Maria, CA.....	9,500	<b>Greka Energy</b>	03/99
<b>Wainoco</b> Cheyenne, WY.....	38,670	<b>Frontier Oil Corp.</b>	11/99

bbl/cd = Barrels per calendar day.

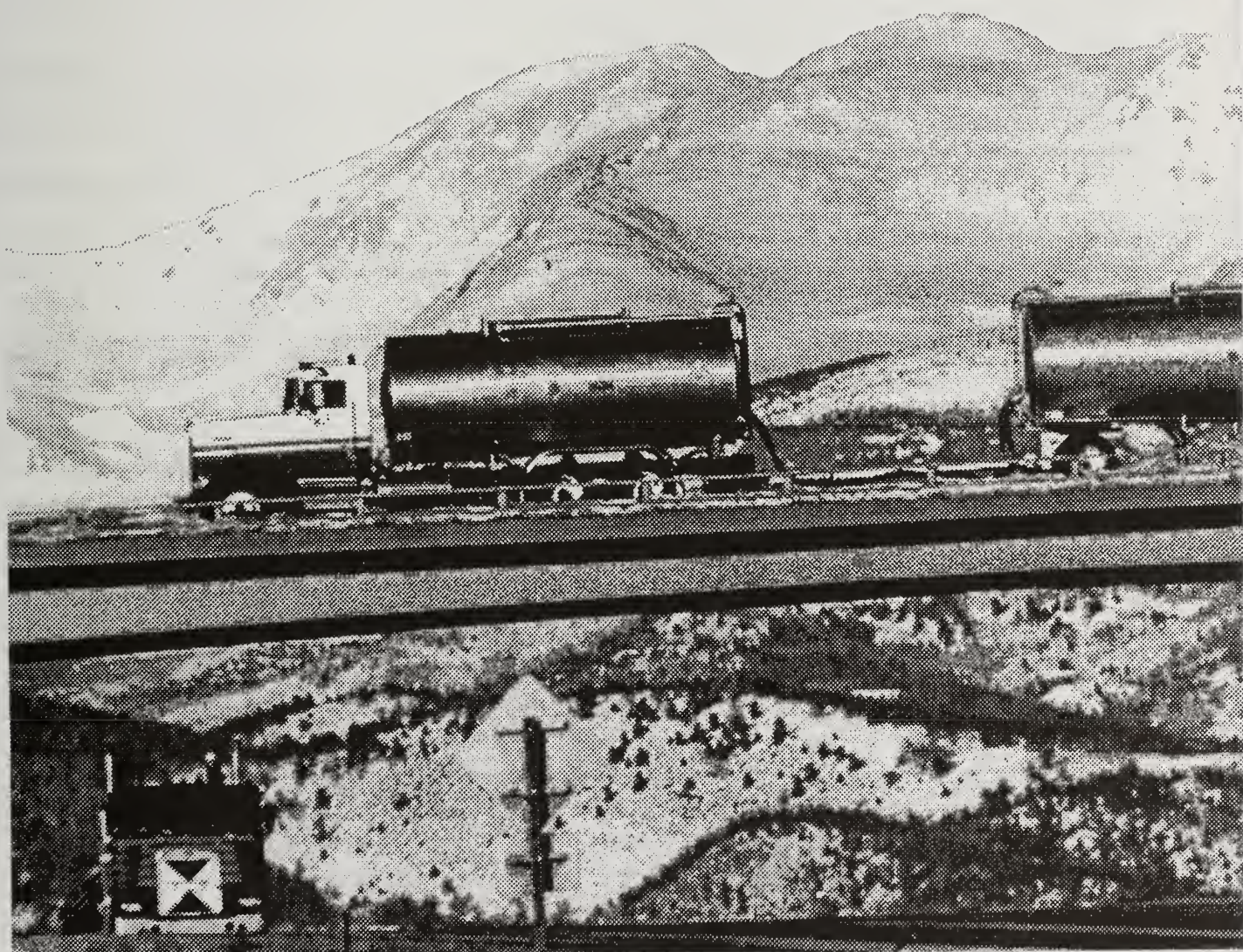
Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."





## Appendix A

### District Descriptions and Maps



*Tank trucks are used to distribute heating oil to remote areas.*





## Appendix A

# District Descriptions and Maps

The following are the Refining Districts which make up the Petroleum Administration for Defense (PAD) Districts.

### PAD District I

**East Coast:** District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung, and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian No. 1:** The State of West Virginia and those parts of the States of Pennsylvania and New York not included in the East Coast District.

### Sub-PAD District I

**New England:** The States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

**Central Atlantic:** The District of Columbia and the States of Delaware, Maryland, New Jersey, New York, and Pennsylvania.

**Lower Atlantic:** The States of Florida, Georgia, North Carolina, South Carolina, Virginia and West Virginia.

### PAD District II

**Indiana-Illinois-Kentucky:** The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and Ohio.

**Minnesota-Wisconsin-North and South Dakota:** The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma-Kansas-Missouri:** The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

### PAD District III

**Texas Inland:** The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast:** The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

**Louisiana Gulf Coast:** The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana-Arkansas:** The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico:** The State of New Mexico.

### PAD District IV

**Rocky Mountain:** The States of Montana, Idaho, Wyoming, Utah, and Colorado.

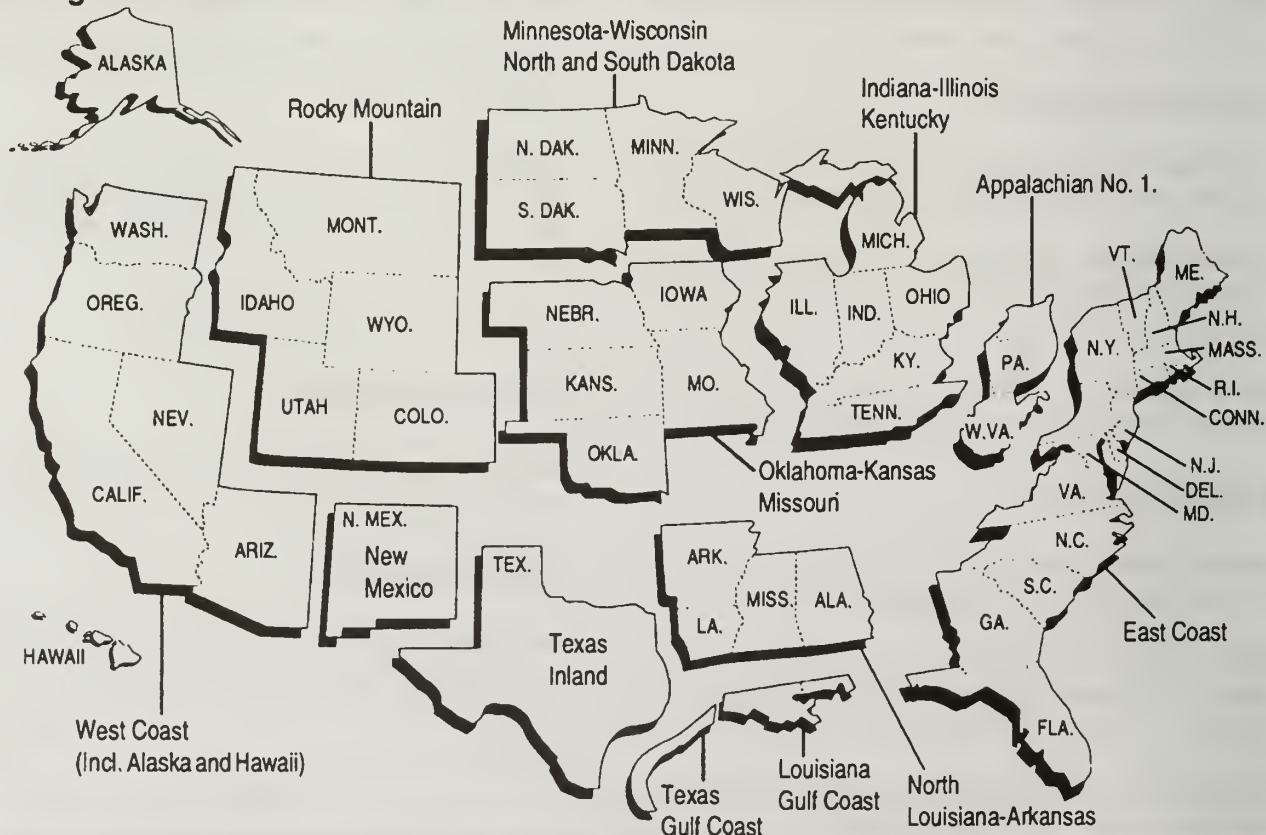
### PAD District V

**West Coast:** The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

## Petroleum Administration for Defense (PAD) Districts



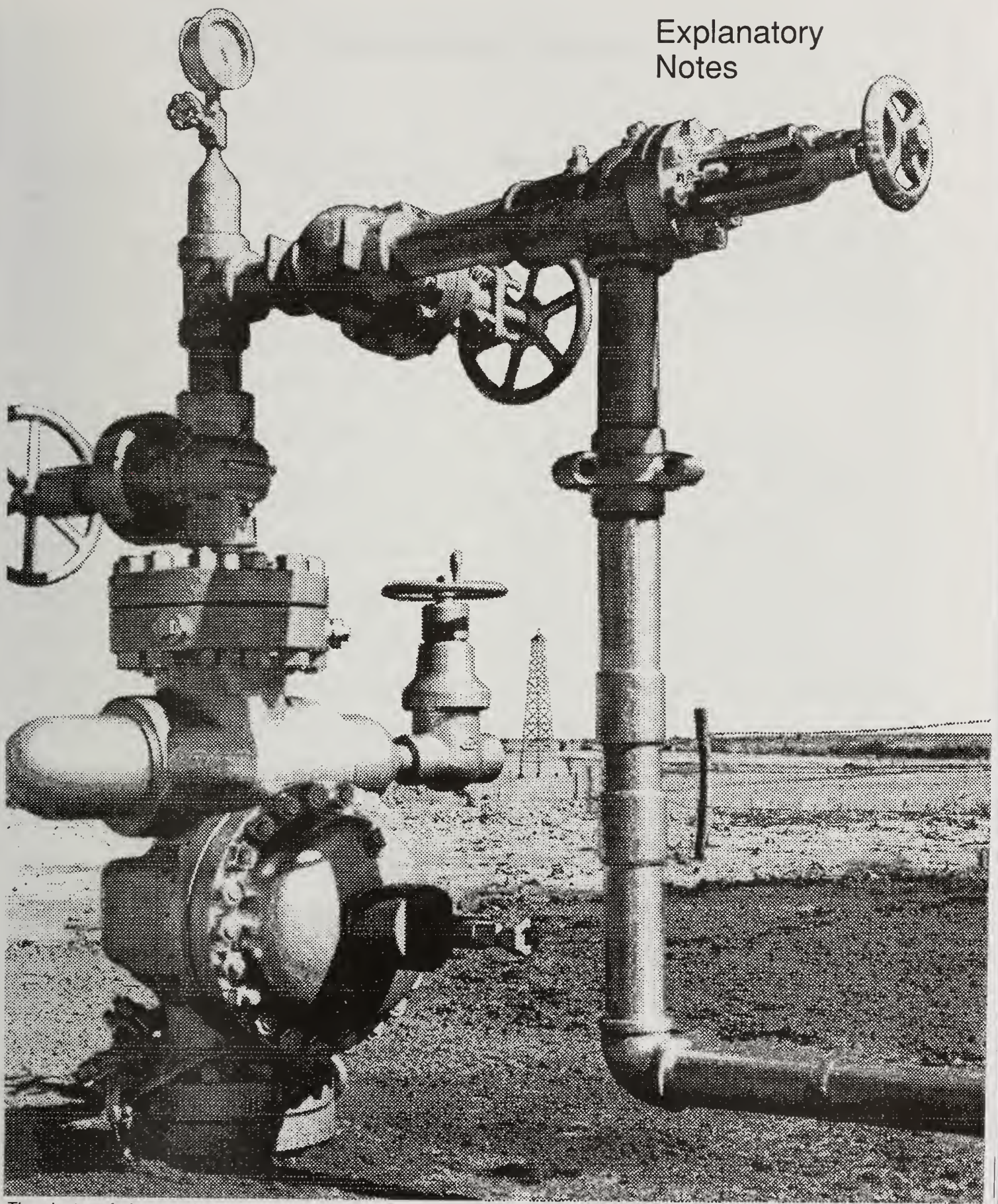
## Refining Districts





## Appendix B

### Explanatory Notes



*The cluster of pipes and valves that control the flow of oil at the mouth of an oil well is what oilmen call a "Christmas Tree."*





## Explanatory Notes

The following Explanatory Notes are provided to assist in understanding and interpreting the data presented in this publication.

- Note 1. Petroleum Supply Reporting System
- Note 2. Monthly Petroleum Supply Reporting System
- Note 3. Form EIA-820: Annual Refinery Report
- Note 4. Technical Notes for Detailed Statistics Tables
- Note 5. Domestic Crude Oil Production
- Note 6. Export Data
- Note 7. Quality Control and Data Revision
- Note 8. Frames Maintenance
- Note 9. Descriptive Monthly Statistics
- Note 10. Practical Limitations of Data Collection Efforts
- Note 11. 1981 Changes in the Petroleum Supply Reporting System
- Note 12. 1983 Changes in the Petroleum Supply Reporting System
- Note 13. 1984 Changes in the Petroleum Supply Reporting System
- Note 14. 1985 Changes in the Petroleum Supply Reporting System
- Note 15. 1986 Changes in the Petroleum Supply Reporting System
- Note 16. 1987 Changes in the Petroleum Supply Reporting System
- Note 17. 1989 Changes in the Petroleum Supply Reporting System
- Note 18. 1990 Changes in the Petroleum Supply Reporting System
- Note 19. 1993 Changes in the Petroleum Supply Reporting System
- Note 20. 1994 Changes in the Petroleum Supply Reporting System
- Note 21. 1995 Changes in the Petroleum Supply Reporting System
- Note 22. 1997 Changes in the Petroleum Supply Reporting System
- Note 23. 1999 Changes in the Petroleum Supply Reporting System
- Note 24. Motor Gasoline Blending Plants

### Note 1. Petroleum Supply Reporting System

The Petroleum Supply Reporting System (PSRS) represents a family of data collection survey forms, data processing systems, and publication systems that have been consolidated to achieve comparability and consistency throughout. The survey forms that comprise the PSRS are:

Form Number	Name
EIA-800	"Weekly Refinery Report"
EIA-801	"Weekly Bulk Terminal Report"
EIA-802	"Weekly Product Pipeline Report"
EIA-803	"Weekly Crude Oil Stocks Report"
EIA-804	"Weekly Imports Report"
EIA-807	"Propane Telephone Survey"
EIA-810	"Monthly Refinery Report"
EIA-811	"Monthly Bulk Terminal Report"
EIA-812	"Monthly Product Pipeline Report"
EIA-813	"Monthly Crude Oil Report"
EIA-814	"Monthly Imports Report"
EIA-816	"Monthly Natural Gas Liquids Report"
EIA-817	"Monthly Tanker and Barge Movement Report"
EIA -819M	"Monthly Oxygenate Telephone Report"
EIA-820	"Annual Refinery Report"

Forms EIA-800 through 804 comprise the Weekly Petroleum Supply Reporting System (WPSRS). A sample of all petroleum companies report weekly data to the Energy Information Administration (EIA) on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys. Data collected from the WPSRS are used to develop estimates of the most current monthly quantities in the Summary Statistics section of the *Petroleum Supply Monthly* (PSM) and which appear in the *Weekly Petroleum Status Report* (WPSR).

The Form EIA-807, "Propane Telephone Survey," is used to collect data on production, stocks, and imports of pro-



pane. These data are used to monitor the supply of propane and to report to the Congress and others on supplies when requested. Data are collected from a sample of respondents reporting on the Monthly Petroleum Supply Reporting System (MPSRS) surveys. Data are collected on a weekly basis during the heating season (October through March). During the non-heating season (April through September) data are collected on end-of-month stocks only. These data are published in the *WPSR*.

Forms EIA-810 through 814, 816, and 817 comprise the MPSRS. These surveys are used to collect detailed refinery/blender and natural gas plant operations data; refinery/blender, bulk terminal, oxygenate plant, natural gas plant and pipeline stocks data; crude oil and petroleum product imports data; and data on movements of petroleum products and crude oil between Petroleum Administration for Defense (PAD) Districts. A description of the MPSRS forms follows in Explanatory Note 2.

Data from these surveys are published in preliminary form in the *PSM*. They are published in final form in the *Petroleum Supply Annual* (PSA), Volumes 1 and 2.

Summary information on the revision error between preliminary and final data is published once a year in the *PSM* feature article entitled, "Accuracy of Petroleum Supply Data." The next article will evaluate the accuracy of the data for 1997 and 1998 compared with previous years.

The Form EIA-819M, "Monthly Oxygenate Telephone Report," is used to collect preliminary data on production and stocks of oxygenates by PAD District. These data are used to monitor the supply of oxygenates. Data are collected from a sample of respondents reporting on the MPSRS surveys and from a sample of fuel ethanol producers. Data are published in Appendix D of the *PSM* and also in the *WPSR*.

The Form EIA-819A, "Annual Oxygenate Capacity Report," was used to collect data on current and projected production capacity of oxygenates and annual production and end-of-year inventories of fuel ethanol. This survey, which was last conducted for January 1, 1995 and published in the *Petroleum Supply Annual* 1994, has been eliminated.

The Form EIA-820, "Annual Refinery Report," is used to collect data on refinery fuel use and consumption of steam and electricity, refinery receipts of crude oil by method of transportation, operable capacity for atmospheric crude oil distillation units and downstream units, as well as production capacity and storage capacity for petroleum products. In 1996, this survey was moved to a biennial schedule (every other year). No surveys were conducted for January 1, 1996 and January 1, 1998 data. The survey

was last conducted in January 1999 and has reverted to an annual schedule for January 1, 2000. This survey is described in more detail in Explanatory Note 3.

## Note 2. Monthly Petroleum Supply Reporting System

The Monthly Petroleum Supply Reporting System (MPSRS) was implemented in January 1983 as the result of an extensive effort by the Energy Information Administration (EIA) to integrate the collection and processing of petroleum supply data that had been collected on other survey forms for many years. The collection of monthly petroleum supply statistics began as early as 1918 when the U.S. Bureau of Mines began collecting data on refinery operations and crude oil stocks and movements. The collection systems were further expanded in 1925 to include natural gas plant liquids production and storage, imports of crude oil and petroleum products and storage and movement of petroleum products in 1959, and tanker and barge movements of crude oil and petroleum products in 1964. Since their inception, each survey has undergone numerous changes, but the MPSRS was the first effort to make them all consistent and comparable. The forms that comprise the MPSRS are:

Form Number	Name
EIA-810	"Monthly Refinery Report"
EIA-811	"Monthly Bulk Terminal Report"
EIA-812	"Monthly Product Pipeline Report"
EIA-813	"Monthly Crude Oil Report"
EIA-814	"Monthly Imports Report"
EIA-816	"Monthly Natural Gas Liquids Report"
EIA-817	"Monthly Tanker and Barge Movement Report"
EIA-819M	"Monthly Oxygenate Telephone Report"

### Respondent Frame

Form EIA-810, "Monthly Refinery Report" - Operators of all operating and idle petroleum refineries and blending plants located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam and other U.S. possessions. Approximately 250 respondents report on the Form EIA-810.

Form EIA-811, "Monthly Bulk Terminal Report" - Every bulk terminal operating company located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and other U.S. possessions. A bulk terminal is primarily used for storage and/or marketing of petroleum products and has a total bulk storage capacity of 50,000 barrels or more, and/or receives petroleum products by tanker, barge, or pipeline. Bulk terminal facilities associated with

a product pipeline are included. Approximately 300 respondents report on the Form EIA-811.

Form EIA-812, "Monthly Product Pipeline Report" - All product pipeline companies that carry petroleum products (including interstate, intrastate, and intracompany pipelines) in the 50 States and the District of Columbia. Approximately 80 respondents report on the Form EIA-812.

Form EIA-813, "Monthly Crude Oil Report" - All companies which carry or store 1,000 barrels or more of crude oil. Included in this survey are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil (except refineries), and companies transporting Alaskan crude oil by water in the 50 States and the District of Columbia. Approximately 170 respondents report on the Form EIA-813.

Form EIA-814, "Monthly Imports Report" - All companies, including subsidiary or affiliated companies, that import crude oil or petroleum products (1) into the 50 States and the District of Columbia, (2) into Puerto Rico, the Virgin Islands and other U.S. possessions (Guam, Midway Islands, Wake Island, American Samoa, and Northern Mariana Islands), and (3) from Puerto Rico, the Virgin Islands and other U.S. possessions into the 50 States and the District of Columbia. Imports into Foreign Trade Zones located in the 50 States and the District of Columbia are considered imports into the 50 States and the District of Columbia and must be reported. A report is required only if there has been an import during the month unless the importer has been selected as part of a sample to report every month regardless of activity. Approximately 190 respondents report on the Form EIA-814.

Form EIA-816, "Monthly Natural Gas Liquids Report" - Operators of all facilities that extract liquid hydrocarbons from a natural gas stream (natural gas processing plant) and/or separate a liquid hydrocarbon stream into its component products (fractionator). Approximately 525 respondents report on the Form EIA-816.

Form EIA-817, "Monthly Tanker and Barge Movement Report" - All companies that have custody of crude oil or petroleum products transported by tanker or barge between Petroleum Administration for Defense (PAD) Districts or between the Panama Canal and the United States. For purposes of this report, custody is defined as physical possession of crude oil or petroleum products on a company-owned tanker or barge. Also, companies which lease vessels or contract for the movement of crude oil or petroleum products on a tanker or barge between PAD Districts or between the Panama Canal and the United States are considered to have custody. Approximately 45 respondents report on the Form EIA-817.

Form EIA-819M, "Monthly Oxygenate Telephone Report" - The sample of companies that report on the EIA-819M are selected from the universe of companies that report on the MPSRS surveys and from the universe of fuel ethanol producers who reported on the Form EIA-819A, "Annual Oxygenate Capacity Report", in 1995. The universe consists of (1) operators of facilities that produce (manufacture or distill) oxygenates (including MTBE plants, petrochemical plants, and refineries that produce oxygenates as part of their operations); (2) operators of petroleum refineries; (3) operators of bulk terminals, bulk stations, blending plants, and other nonrefinery facilities that store and/or blend oxygenates; and (4) importers of oxygenates (importer of record) located in or importing oxygenates into the 50 States and the District of Columbia. Approximately 100 respondents report on the Form EIA-819M.

### Sampling

The sampling procedure used for the survey Form EIA-819M is the cut-off method and is performed using software developed for EIA's Survey Methods Group. In the cut-off method, companies are ranked from largest to smallest on the basis of quantities reported (oxygenate production, oxygenate stocks, and oxygenate imports) during the previous year. Companies are chosen for the sample beginning with the largest and adding companies until the sample covers approximately 90 percent of the total for each oxygenate product and supply type by geographic region (PAD Districts I through V).

### Description of Survey Forms

The Form EIA-810, "Monthly Refinery Report," is used to collect data on refinery input and capacity, sulfur content and API gravity of crude oil, and data on supply (beginning stocks, receipts, and production) and disposition (inputs, shipments, fuel use and losses, and ending stocks) of crude oil and refined products.

The Form EIA-811, "Monthly Bulk Terminal Report," is used to collect data on end-of-month stock levels of finished petroleum products by State in the custody of the bulk terminal company regardless of ownership. Leased tankage at other facilities is excluded. All domestic and foreign stocks held at bulk terminals and in-transit thereto, except those in-transit by pipeline are included. Petroleum products in-transit by pipeline are reported by pipeline operators on Form EIA-812, "Monthly Product Pipeline Report."

The Form EIA-812, "Monthly Product Pipeline Report," is used to collect data on end-of-month stock levels and movements of petroleum products transported by pipe-



line. Intermediate movements for pipeline systems operating in more than two PAD Districts are included.

The Form EIA-813, "Monthly Crude Oil Report," is used to collect data on end-of-month stocks of crude oil held at pipeline and tank farms (associated with the pipelines) and terminals operated by the reporting company. Also, crude oil consumed by pipelines and on leases as pump fuel, boiler fuel, etc., is reported. Data are reported on a PAD District basis.

Total Alaskan crude oil stocks in-transit by water (including stocks held at transshipment terminals between Alaska and the continental United States) to the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands are also reported by the transporting company having custody of the stocks.

Inter-PAD District movements of crude oil by pipeline are collected by the shipping and receiving PAD District. Intermediate movements for pipeline systems operating in more than two PAD Districts are not included.

The Form EIA-814, "Monthly Imports Report," is used to collect data on imports of crude oil and petroleum products (1) into the 50 States and the District of Columbia, (2) into Puerto Rico, the Virgin Islands, and other U.S. possessions (Guam, Midway Islands, Wake Island, American Samoa, and Northern Mariana Islands), and (3) from Puerto Rico, the Virgin Islands, and other U.S. possessions into the 50 States and the District of Columbia. Imports into Foreign Trade Zones located in the 50 States and the District of Columbia are considered imports into the 50 States and the District of Columbia.

The type of commodity, port of entry, country of origin, quantity (thousand barrels), sulfur percent by weight, API gravity, and name and location of the processing or storage facility are reported. Sulfur percent by weight is requested for crude oil, crude oil burned as fuel, and residual fuel oil only. API gravity is requested for crude oil only. The name and location of the processing or storage facility is requested for crude oil, unfinished oils, other hydrocarbons/hydrogen/oxygenates, and blending components only.

The Form EIA-816, "Monthly Natural Gas Liquids Report," is used to collect data on the operations of natural gas processing plants and fractionators. Beginning and end-of-month stocks, receipts, inputs, production, shipments, and plant fuel use and losses during the month are collected from operators of natural gas processing plants. End-of-month stocks are collected from fractionators.

The Form EIA-817, "Monthly Tanker and Barge Movement Report," is used to collect data on the movements of

crude oil and petroleum products between PAD Districts. Data are reported by shipping and receiving PAD District and sub-PAD District. Shipments to and from the Panama Canal are also included if the shipment was delivered to the Canal.

The Form EIA-819M, "Monthly Oxygenate Telephone Report," is used to collect data on production, stocks, and imports of oxygenates. Data on end-of-month stocks are reported on a custody basis regardless of ownership. Data are reported on a PAD District basis.

### **Collection Methods**

Except for the EIA-819M, survey forms for the MPSRS can be submitted by mail, facsimile, or electronic transmission. Completed forms are required to be postmarked by the 20th calendar day following the end of the report month. Data collection for the EIA-819M begins on the seventh working day of each month. Data are solicited by telephone or transmitted to the EIA by facsimile. Receipt of the reports are monitored using an automated respondent mailing list. Telephone follow-up calls are made to nonrespondents prior to the publication deadline.

### **Response Rate**

The response rate is generally 95 to 100 percent. Chronic nonrespondents and late filing respondents are contacted in writing and reminded of their requirement to report. Companies that file late or fail to file are subject to criminal fines, civil penalties, and other sanctions as provided by Section 13(i) of the Federal Energy Administration (FEA) Act.

### **Data Imputation**

Imputation is performed for companies that fail to file Forms EIA-810 through 813, 816, and 819M. For such companies, previous monthly values are used for current values. On the EIA-819M, data are aggregated for each geographic region. Estimation factors, which are derived from the previous year's data, are then applied to each cell to generate published estimates. Data for nonrespondents on the Forms EIA-814 and 817 are not imputed because these data series, by respondent, are highly variable.

### **Confidentiality**

The Office of Legal Counsel of the Department of Justice concluded on March 20, 1991, that the Federal Energy Administration Act requires the Energy Information Administration to provide company-specific data to the Department of Justice, or to any Federal agency when requested for official use, which may include enforcement of Federal law. The information contained on this form



may also be made available, upon request, to another component of the Department of Energy (DOE), to any Committee of Congress, the General Accounting Office, or other Congressional agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order.

The information contained on Forms EIA-810 through 813, 816, 817, and 819M are kept confidential and not disclosed to the public to the extent that they satisfy the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. 552, the Department of Energy (DOE) regulations, 10 C.F.R. 1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. 1905. The information contained on Form EIA-814 are not considered confidential and historically has not been treated as such.

Upon receipt of a request for this information under the FOIA, the DOE shall make a final determination whether the information is exempt from disclosure in accordance with the procedures and criteria provided in the regulations. To assist us in this determination, respondents should demonstrate to the DOE that, for example, their information contains trade secrets or commercial or financial information whose release would be likely to cause substantial harm to their company's competitive position. A letter accompanying the submission that explains (on an element-by-element basis) the reasons why the information would be likely to cause the respondent substantial competitive harm if released to the public would aid in this determination. A new justification does not need to be provided each time information is submitted on the form, if the company has previously submitted a justification for that information and the justification has not changed. Company specific data are also provided to other DOE offices for the purpose of examining operations in the context of emergency response planning and actual emergencies.

The data collected on Forms EIA-810 through 814, 816, and 817 appear in EIA publications such as *Petroleum Supply Monthly* (PSM), *Monthly Energy Review*, *Petroleum Supply Annual* (PSA), and the *Annual Energy Review*.

Data on the breakdown between liquefied refinery gases and olefins and lubricants are suppressed on Table 16, "Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts" to avoid disclosure of company identifiable data.

Statistics representing data aggregated from less than three companies or aggregated data representing 60 percent or more of a single company's data are suppressed on

the PSA tables listed below. In addition, complementary suppression is performed to avoid any residual disclosure.

- Table 16, "Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts," (inputs of oxygenates)
- Table 18, "Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts," (stocks of oxygenates)
- Table 30, "Stocks of Crude Oil and Petroleum Products by PAD District," (stocks of oxygenates)
- Table 31, "Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products," (all products)

With the exception of the tables listed above, the tables in the PSA are not subject to statistical nondisclosure procedures. Thus, there may be some table cells which are based on data from only one or two respondents, or which are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable user of the data to make inferences about the data reported by a specific respondent.

### **Note 3. Form EIA-820: Annual Refinery Report**

Refinery capacity data collection was begun in 1918 by the Bureau of Mines, then in the Department of Commerce, and was operated on a voluntary basis until 1980. In 1980, the mandatory Energy Information Administration (EIA) Form EIA-177, *Capacity of Petroleum Refineries*, was implemented. Information on refining capacity was expanded to include not only current year operations, but two-year projections, and refinery input/production data. Working storage capacity data was also added to the form and product categories were added for total coverage. Information on refinery downstream facilities was expanded to include a breakdown of thermal operations and to add vacuum distillation, catalytic hydrotreating and hydrotreating. Production capacity was also added to include information on isomerization, alkylation, aromatics, asphalt/road oil, coking, lubricants and hydrogen.

In 1983, the form was revised to improve the consistency and quality of the data collected by the EIA and redesignated as Form EIA-820, "Annual Refinery Report." Two sections for data previously reported monthly were added: (1) refinery receipts of crude oil by method of transportation, and (2) fuels consumed for all purposes at refineries. Also, the second year projections on refining capacity were eliminated. As a result of a study conducted by the EIA evaluating motor gasoline data collected by the Federal Highway Administration (FHWA) and by the EIA, motor gasoline blending plants were included for the first time in the respondent frame in order to produce more accurate statistics on the production of motor gasoline.



In 1987, the form was revised to reduce respondent burden and to better reflect current refinery operations through updated terminology. Information on projected input/production of refinery processing facilities was deleted. Several categories under catalytic hydrotreating were combined: naphtha and reformer feeds were combined into a single category as well as residual fuel oil and other. Thermal cracking types, gas oil and "other" were also combined into a single category. Catalytic reforming types, conventional and bi-metallic were replaced with low and high pressure processing units. Two new categories were added: fuels solvent deasphalting was added to downstream charge capacity and sulfur recovery was added to production capacity.

In 1994, the form was revised to enable EIA to calculate utilization rates for certain downstream processing units and to reflect storage capacity of fuels mandated by the Clean Air Act Amendments of 1990. Additions to the form included calendar day downstream charge capacity for fluid and delayed coking, catalytic cracking, and catalytic hydrocracking. Also storage capacity categories for reformulated, oxygenated, and other finished motor gasoline were added, as well as oxygenate storage capacity and separate categories for high and low sulfur distillate fuel oil.

In 1995, motor gasoline blending plants were dropped from the survey frame, since by this time, the only section of the form that applied to them was working and shell storage capacity. Also in 1995, a decision was made to no longer collect storage capacity from shutdown refineries; therefore, these refineries were also eliminated from the survey frame.

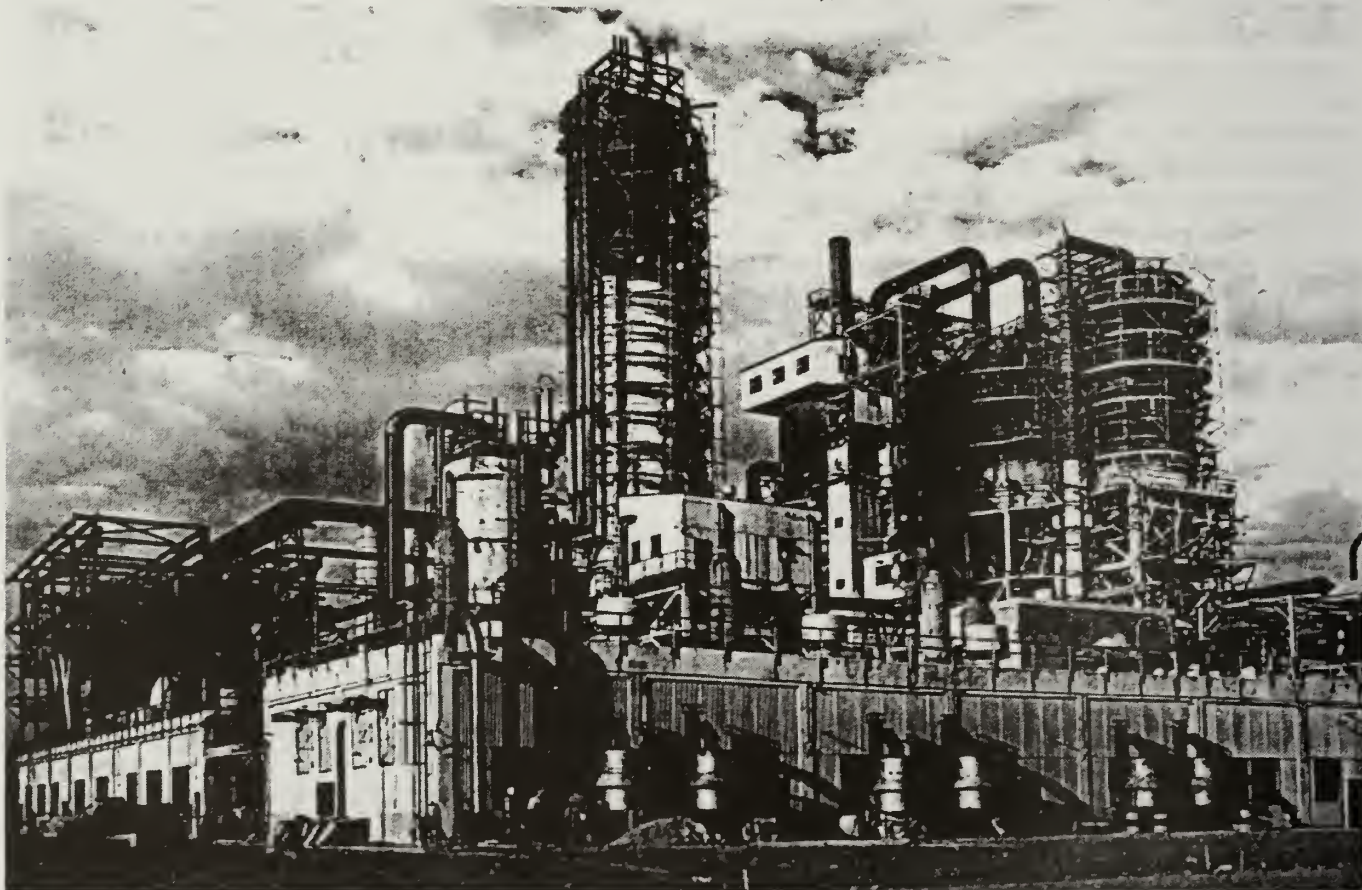
In 1996, the survey was moved to a biennial schedule (every other year) and was renamed "Biennial Refinery Report." The survey was not conducted for January 1, 1996 or January 1, 1998.

Respondents were not required to submit data for crude oil and petroleum products consumed at refineries during 1995 and 1997. These data are available from the Form EIA-810, "Monthly Refinery Report." The requirement to submit data for refinery consumption of natural gas, coal, and purchased steam and electricity on the Form EIA-820 remained.

In 2000, the survey was moved to an annual schedule.

#### **Respondent Frame**

The respondent frame consists of all operating and idle petroleum refineries (including new refineries under construction), located in the 50 States, the District of Colum-



*Refinery cat-cracker.*



bia, Puerto Rico, the Virgin Islands, Guam and other U.S. possessions. As of January 1, 2000, there were 158 refineries and 45 motor gasoline blending plants in the 50 States. A list of motor gasoline blending plants operating during 1999 is provided in Explanatory Note 24.

The respondent frame is maintained by monitoring the monthly Form EIA-810, "Monthly Refinery Report," and industry publications for changes and developments in the petroleum industry such as refinery sales, mergers and new operations.

### **Description of Survey Form**

The Form EIA-820 is used to collect data on fuels consumed for all purposes at the refinery during the preceding year; refinery receipts of crude oil by method of transportation during the preceding year; current and next year projections for operable atmospheric crude oil distillation capacity, downstream charge capacity and production capacity; and current year working and shell storage capacity for crude oil and petroleum products at the refinery.

### **Collection Methods**

The Form EIA-820 is sent to respondents in December. Survey forms can be submitted by mail or facsimile. Completed forms are required to be postmarked by the 15th day of February of the current report year. Receipt of the reports is monitored using an automated respondent mailing list. Telephone follow-up calls are made to secure responses from those companies failing to report by February 15th.

### **Response Rate**

The response rate for the Form EIA-820 is normally very high. Data are estimated and non-compliance procedures are implemented for those companies still not reporting data by close-out for the report year.

### **Data Imputation**

Imputation is performed for companies that fail to file prior to the publication deadline. For the January 1, 2000 survey, there were no nonrespondents. When nonresponse occurs, values for these companies are imputed from data reported on the most recent year's Form EIA-820 and/or from data reported on Form EIA-810, "Monthly Refinery Report," for that company. For most surveyed items, the value imputed for nonrespondents is the value that company reported on the Form EIA-820 for the most recent year. For three categories of information however, the imputed value is also based on their data from the Form EIA-810 as follows:

### **Section 1: Fuel, Electricity, and Steam Consumed for all Purposes at Refineries**

Data for crude oil, distillate and residual fuel oil, liquefied petroleum gases, still gas, and marketable and catalyst petroleum coke are based upon data reported on the monthly Form EIA-810.

Estimates for natural gas, coal, electricity and steam are taken directly from data reported on the previous year's annual Form EIA-820.

### **Section 2: Refinery Receipts of Crude Oil by Method of Transportation**

The imputation methodology for this section is based on data reported on both the monthly Form EIA-810 and the annual Form EIA-820. Annual refinery receipts of domestic and foreign crude oil for a nonrespondent are imputed by aggregating the values for the refinery on the monthly survey. These values are allocated to the method of transportation by using the percentages reported for the refinery in the previous year. The difference between the values reported on the two surveys by all respondents in 1999 was about 2.0 percent.

### **Section 3: Operable and Storage Capacity as of January 1**

Operable atmospheric crude oil distillation capacity in barrels per calendar day is collected on the monthly Form EIA-810 as of the first day of each month and on the annual Form EIA-820 as of January 1. As part of the editing process for the Form EIA-820, these two values are compared. Companies are contacted and any discrepancies are resolved by the time of publication. Imputed values for operable atmospheric crude oil distillation capacity in barrels per calendar day are taken directly from the January Form EIA-810. A barrels per stream day capacity is then derived by dividing the reported barrels per calendar day capacity by .95.

Current year and projected year data for downstream charge capacity, production capacity, and data for working and shell storage capacity are taken directly from the previous year's annual report.

### **Confidentiality**

The Office of Legal Counsel of the Department of Justice concluded on March 20, 1991, that the Federal Energy Administration Act requires the Energy Information Administration to provide company-specific data to the Department of Justice, or to any other Federal agency when requested for official use, which may include enforcement of Federal law. The information contained on this form may also be made available, upon request, to another



component of the Department of Energy (DOE), to any Committee of Congress, the General Accounting Office, or other Congressional agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order.

Information on operable atmospheric crude oil distillation capacity, downstream charge capacity, and production capacity on Form EIA-820 are not considered as confidential, and historically have not been treated as such. Company identifiable data are published in the *Petroleum Supply Annual* (PSA) 1999, Volume 1, Tables 38, 39, and 40.

Other data on the Form EIA-820 are kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C.552, Department of Energy (DOE) regulations, 10 C.F.R.1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C.1905.

Upon receipt of a request for this information under the FOIA, the DOE shall make a final determination whether the information is exempt from disclosure in accordance with the procedures and criteria provided in the regulations. To assist us in this determination, respondents should demonstrate to the DOE that, for example, their information contains trade secrets or commercial or financial information whose release would be likely to cause substantial harm to their company's competitive position. A letter accompanying the submission that explains (on an element-by-element basis) the reasons why the information would be likely to cause the respondent substantial competitive harm if released to the public would aid in this determination. A new justification does not need to be provided each time information is submitted on the form, if the company has previously submitted a justification for that information and the justification has not changed.

The data collected on Form EIA-820, "Annual Refinery Report," is used to report aggregate statistics on and conduct analyses of the operation of U.S. petroleum refineries. The data appear in EIA publications such as *PSA*, and the *Annual Energy Review*. Company specific data are also provided to other DOE offices for the purpose of examining specific refinery operations in the context of emergency response planning and actual emergencies.

The tables pertaining to refinery receipts of crude oil by method of transportation and fuels consumed at the refinery published in the *PSA* are not subject to statistical nondisclosure procedures. Thus, there may be some table cells which are based on data from only one or two respondents, or which are dominated by data from one or two large respondents. In these cases, it may be possible for a

knowledgeable user of the data to make inferences about the data reported by a specific respondent.

### Quality Control

There are two types of errors usually associated with data produced from a survey - sampling errors and nonsampling errors. Because estimates from the Form EIA-820 survey are based on a complete census of the frame of petroleum refineries, there is no sampling error in the data presented in this report. The data, however, are subject to nonsampling errors. Nonsampling errors are those which can arise from: (1) the inability to obtain data from all companies in the frame or sample (nonresponse) and the method used to account for nonresponses; (2) definitional difficulties and/or improperly worded questions which lead to different interpretations; (3) mistakes in recording or coding the data obtained from respondents; and (4) other errors of collection, response, coverage, and estimation. Quality control procedures are employed in the collection and editing operations to minimize misrepresentation and misreporting. Nonresponse follow-up procedures are employed to reduce the number of nonrespondents, and procedures employed to impute missing data, introduce a minimal amount of error, given the relatively small volume of imputed data.

### Resubmissions

Resubmissions are required whenever an error greater than 5 percent of the true value is discovered. In the event of a reporting error, company reports are updated after contact with the company and are followed up by corrected report resubmissions. Late submissions or resubmissions received after the publication date are entered into a "working" file. This file contains the most up-to-date data for the Form EIA-820 and is used to edit next year's data.

## Note 4. Technical Notes for Detailed Statistics Tables

The detailed statistics tables in the *Petroleum Supply Annual* provide complete supply and demand information for the previous year. The tables are organized to locate National and Petroleum Administration for Defense (PAD) District summary data at the front followed by tables on crude oil and petroleum product production, import/export data, stocks information, and lastly, data on crude oil and petroleum product movements. To assist in the interpretation of these tables, the following technical notes are provided. Column and row headings are defined in the Glossary.

## Supply

**Field Production** - Field production is the sum of crude oil production, natural gas plant liquids production, other liquids production, and finished petroleum products production.

Crude oil production is an estimate based on data received from various State agencies and the Minerals Management Service of the U.S. Department of the Interior. Refer to Explanatory Note 5 for further details.

Field production of natural gas plant liquids is reported on Form EIA-816 and published on a net basis (i.e., production minus inputs) in this column.

Other liquids field production is calculated by forcing the product supplied to be zero: thereby backing into field production.

Field production of finished petroleum products is calculated by (1) adding the amount of fuel ethanol that has been blended into finished motor gasoline, and (2) plus (+) or minus (-) the field production of motor gasoline blending components. Refer to Explanatory Note 10 for a further discussion of this calculation.

Negative field production of motor gasoline blending components represents an understatement for finished motor gasoline.

Negative field production of other finished motor gasoline represents an overstatement of other finished motor gasoline and an understatement of oxygenated motor gasoline.

**Refinery Production** - Published production of these products equal refinery production minus refinery input. Refinery production of other hydrocarbons, hydrogen and alcohol, unfinished oils, and motor and aviation gasoline blending components appear on a net basis under refinery input. Negative refinery production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month.

**Unaccounted for Crude Oil** - This column is a balancing item for crude oil. This data element represents the difference between crude oil supply and disposition. Crude oil supply is the sum of field production and imports. Crude oil disposition is the sum of stock change, losses, refinery inputs, exports, and products supplied. A positive result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result

indicates that more crude oil was reported to have been supplied to refiners and exporters than they reported to have used.

## Disposition

**Stock Change** - This column is calculated as the difference between the Ending Stocks column of this table and the Ending Stocks column of the prior year's publication. A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

**Crude Losses** - The volume of crude oil reported by petroleum refineries as being lost in their operations. These losses are due to spills, contamination, fires, etc., as opposed to refining processing losses or gains.

**Refinery Inputs** - Refinery inputs of crude oil and intermediate materials (unfinished oils, gasoline blending components, other hydrocarbons and oxygenates, liquefied petroleum gases, and pentanes plus) that are processed at refineries to produce finished petroleum products.

Crude oil inputs represents total crude oil (domestic and foreign) input to atmospheric crude oil distillation units and other refinery processing units (i.e., catalytic cracking units, cokers).

Inputs of natural gas liquids are natural gas liquids received from natural gas plants for blending and processing. Published inputs of natural gas liquids are reported on a gross basis.

Inputs of unfinished oils, motor and aviation gasoline blending components, and other hydrocarbons and oxygenates are published on a net basis (i.e., refinery input minus refinery production).

Inputs of finished petroleum products are published on a net basis (i.e., refinery production minus refinery inputs) and displayed under the refinery production column.

**Exports** - Exports include crude oil shipments from the 50 States to Puerto Rico, and the Virgin Islands.

**Products Supplied** - Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, (plus net receipts on a PAD District basis), minus stock change, minus crude losses, minus refinery inputs, minus exports.

Products supplied indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative because total disposition of the product exceeds total supply. Negative products supplied may occur for a number of reasons: (1) product reclassification has not been reported; (2) data



were misreported or reported late; (3) in the case of calculations on a PAD District basis, the figure for net receipts was inaccurate because the coverage of interdistrict movements was incomplete; and (4) products such as gasoline blending components and unfinished oils have entered the primary supply channels with their production not having been reported, e.g., streams returned to refineries from petrochemical plants.

Product supplied for crude oil is the sum of crude oil burned on leases and by pipelines as fuel. Prior to January 1983, crude oil burned on leases and by pipelines as fuel were reported as either distillate or residual fuel oil and were included in product supplied for these products.

#### **Yields**

The refinery yield of finished motor gasoline is calculated by subtracting the inputs of pentanes plus, liquefied petroleum gases, other hydrocarbons/alcohol and motor gasoline blending components from the production of finished motor gasoline before dividing by the sum of crude oil input and unfinished oils input (net).

The refinery yield of finished aviation gasoline is calculated by subtracting the inputs of aviation gasoline blending components from the production of finished aviation gasoline before dividing by the sum of crude oil input and unfinished oils input (net).

Refinery yields for all products (except finished motor gasoline and finished aviation gasoline) are calculated by dividing the production for each product by the sum of crude oil input and unfinished oils input (net) reported in the U.S. total.

#### **Stocks**

Primary stocks of petroleum products do not include either secondary stocks held by dealers and jobbers or tertiary stocks held by consumers.

#### **Movements**

Movements of crude oil by pipeline between PAD Districts include trunk pipeline companies (interstate, intrastate, and intracompany pipelines). Intermediate movements for crude oil pipeline systems operating in more than two PAD Districts are not included.

Movements of petroleum products by pipeline between PAD Districts include trunk pipeline companies (interstate, intrastate and intracompany pipelines). Intermediate movements for product pipeline systems operating in more than two PAD Districts are included. For example, a shipment originating in PAD District 3, passing through PAD District 2 to PAD District 1, is reported as a move-

ment from PAD District 3 to PAD District 2 and also from PAD District 2 to PAD District 1.

Waterborne movements of crude oil and petroleum products between PAD Districts include all shipments of crude oil or petroleum products for which the transporter has custody at the time of shipment. Custody is defined as physical possession of crude oil or petroleum products on a company-owned tanker and barge.

### **Note 5. Domestic Crude Oil Production**

The Energy Information Administration (EIA) collects monthly crude oil production data on an ongoing basis. Data on crude oil production for States are reported to the EIA by State government agencies. Data on crude oil production for Federal offshore areas are reported to the EIA by the Minerals Management Service of the U.S. Department of the Interior. Currently, all except five crude oil producing States (New York, Pennsylvania, Ohio, Virginia and West Virginia) report production on a monthly basis. These five States report crude oil production on an annual basis. Estimates of monthly crude oil production for these five States are made by the EIA using data reported on Form EIA-182, "Domestic Crude Oil First Purchase Report."

After the end of each calendar year, the monthly crude oil production estimates are updated using annual reports from various State agencies and the Minerals Management Service. The EIA incorporates production data into its Crude Oil Production System (COPS) as the data are received from the reporting agencies. EIA publications show portions of this database at specific points in time. Table 14 of this publication presents the 1999 crude oil production data received by the EIA as of April 2000. Crude oil production data for 1999 received after April 2000 will be published later as an appendix in the following year's *Petroleum Supply Annual (PSA)*. Table C1 of this publication presents the 1998 crude oil production a year after it was published in the *PSA* 1998.

### **Note 6. Export Data**

Each month the Energy Information Administration (EIA) receives magnetic tapes of aggregated export statistics from the U.S. Bureau of the Census (EM-522 and EM-594).

Census export statistics used in the *Petroleum Supply Annual* reflect both government and nongovernment exports of domestic and foreign merchandise from the United States (the 50 States and the District of Columbia) to foreign countries and U.S. possessions, without regard to whether or not the exportation involves a commercial



transaction. The following types of transactions are excluded from the statistics:

- (1) Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
- (2) Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### Source of Export Information

The official U.S. export statistics are compiled by the U.S. Bureau of the Census. Exporters are required to file export documents with U.S. Customs officials (Customs Form 7525).

#### Country and Area of Destination

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## Note 7. Quality Control and Data Revision

#### Quality Control

The Energy Information Administration (EIA) monitors the supply and disposition of crude oil, petroleum products, and natural gas liquids in the United States. Through a tracking system, the EIA provides insight into the activities of primary operators and distributors in the petroleum industry. The tracking system, known as the Petroleum Supply Reporting System (PSRS), consists of production, inputs, imports, inventories, movements, and other petroleum-related data collected on weekly, monthly, and annual surveys.

Survey forms are periodically reviewed for completeness, meaningfulness, and clarity. Modifications are made, when needed, to maintain efficient measure of the intended data items and to track product movement accurately throughout the industry. Through this process, the EIA can maintain consistency among forms, minimize respondent burden, and eliminate ambiguity.

#### Sampling and Nonsampling Errors

There are two types of errors usually associated with data produced from a survey — nonsampling errors and sampling errors. Because the estimates for the monthly surveys 810 through 813, 816, and 817 are based on a complete census of the frame, there is no sampling error in the data presented. The data, however, are subject to nonsampling errors. Nonsampling errors, sometimes referred to as biases, are those which can arise from a number of sources: (1) the inability to obtain data from all companies in the frame or sample (nonresponse and the method used to account for nonresponses), (2) definitional difficulties and/or improperly worded questions which lead to different interpretations, (3) mistakes in recording or coding the data obtained from respondents, and (4) other errors of collection, response, coverage, and estimation.

Response rates on the monthly surveys are very high. In general, response rates average above 95 percent for the weekly survey and above 98 percent for monthly surveys. Whenever survey responses are not received in time to be included in published statistics, the data are imputed. Although imputing for missing data may not eliminate the total error associated with nonresponse, it can serve to reduce the error. The data reported in the previous month are used as imputed values for missing data for all surveys except the Forms EIA-814, "Monthly Imports Report," and EIA-817, "Monthly Tanker and Barge Movement Report." There is no imputation procedure for these surveys because these data series, by respondent, are highly variable.

Response error is the major factor affecting the accuracy of PSRS data. Response, or reporting error, is the difference between the true value and the value reported on a survey form. Response error can occur for any number of reasons. For example, figures may be entered incorrectly when written on forms by the respondent, or errors may result from the misunderstanding of survey form instructions or definitions. Response error can also occur from the use of preliminary data when final data are not available. This can result in differences between published preliminary and final data. To help detect and minimize probable reporting errors, automated editing procedures are used to check current data for consistency with past data, as well as for internal consistency (e.g., totals equal to the sums of the parts), and to flag those data elements that fail edit criteria.

Errors can also be introduced during data processing. For example, while creating computer data files, key errors can occur in transcribing or coding the data; or information can be entered into the wrong cell. Using well designed edit criteria which examine orders of magnitude,

cell position, and historical reporting patterns, many of these errors can be identified and corrected.

Monthly data are compared to weekly data on a regular basis. Discrepancies between weekly and monthly data are documented and respondents are called when discrepancies are either large (usually over 300 thousand barrels) or consistent (e.g., weekly data are always lower than monthly data). In addition, a comparison of the data collected on the PSRS with other similar data series from sources outside of the Petroleum Division is performed each year. The results of this data comparison are published once a year in the *Petroleum Supply Monthly* (PSM) feature article, "Comparisons of Independent Petroleum Supply Statistics."

Sampling errors are those errors that occur when survey estimates are based on a sample rather than being derived from a complete census of the frame. The 819M data, which are based on sample estimates, serve as leading indicators of the PSRS monthly data for oxygenates. To assess the accuracy of the 819M statistics, data are compared with the monthly aggregate data for the EIA-810, 811, and 812 surveys. Although monthly data are still subject to error, they have been thoroughly reviewed and edited, and are considered to be the most accurate data available.

#### Data Revision

Resubmissions are any changes to the originally submitted data that were either requested by the EIA or initiated by the respondent. Resubmissions are compared with the original submission and processed at the time of receipt. For Forms EIA-810 through 813, 816, and 817 the Resubmission Tracking System (RTS) is run after resubmissions have been processed for the month. The RTS enables the user to study major products and data series to see how company resubmissions impact published data on a month by month basis. During the processing year, a summary of the effect of these resubmissions to major series is provided in Appendix C of the PSM.

For the EIA-819M data, a determination is made on whether to process the resubmissions based on the magnitude of the revision. Cell entries on publication tables are marked with an "R" for revised.

#### Late Response

Respondents who fail to respond within the prescribed time limit (25th day following the end of the report month) become nonrespondents for that particular report period and are contacted by phone to obtain the current month's data. Respondents who are chronically late (i.e., 3 con-

secutive months) are notified by EIA either by letter or telephone.

#### Nonresponse

Follow-up action is taken when a company fails to respond adequately to data requests from the EIA. Preliminary attempts to gather delinquent reports are made by phone. Noncompliance form letters are sent to those companies that have not submitted reports and have not responded to data requests by phone.

### Note 8. Frames Maintenance

The Petroleum Division (PD) maintains complete lists of respondents to its monthly surveys. Each survey has a list of companies and facilities required to submit petroleum activity data. This list is known as the survey frame. Frame maintenance procedures are used to monitor the status of petroleum companies and facilities currently contained in each survey frame as well as to identify new members to be added to the frame. As a result, all known petroleum supply organizations falling within the definition of "Who Must Submit" participate in the survey.

The activities for frames maintenance are conducted on a monthly and annual basis. Monthly frames maintenance procedures focus on examining several frequently published industry periodicals that report changes in status (births, deaths, sales, and acquisitions) of petroleum facilities producing, transporting, importing, and/or storing crude oil and petroleum products. These sources are augmented by articles in newspapers, letters from respondents indicating changes in status, and information received from survey systems operated by other offices. Survey managers review these sources to monitor changes in company operations and to develop lists of potential respondents. These activities assure coverage of the reporting universe and maintain accurate facility information on addresses and ownership.

Annual frames maintenance focuses on re-evaluating the "must submit" companies filing the Form EIA-814 and reviewing the sample frame for the Form EIA-819M, "Monthly Oxygenate Telephone Report."

To supplement the monthly and annual frames maintenance activities and to provide more comprehensive coverage, the PD periodically conducts a comprehensive frames investigation. These investigations result in the reassessment and recompilation of the complete frame for each survey. The effort also includes the evaluation of the impact of potential frame changes on the historical time series data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.



## Changes in Survey Frames

Beginning in January 1981, the Energy Information Administration (EIA) expanded its universe to include non-refinery blenders; redefined motor gasoline into two categories (finished leaded and finished unleaded); and separated blending components from finished motor gasoline as a reporting category. Refer to Explanatory Note 11 for further discussion.

In January 1981, 1983, and 1984 numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock change calculations. Table B1 displays the end-of-year stocks, in million barrels using the expanded coverage (new basis).

Beginning in January 1986, as a result of frames maintenance activities, 39 respondents were added to the monthly survey frames: 2 motor gasoline blenders, 30 bulk terminal operators, 3 pipeline operators, 3 crude oil stock holders, and 1 tanker and barge operator. Table B2 shows the impact of the data reported by the new respondents on published data for production and stocks of major petroleum products.

Also, beginning in January 1986, a major petroleum company consolidated production and stocks reporting for some of its facilities. Data previously reported separately on Form EIA-811, "Monthly Bulk Terminal Report," and on Form EIA-816, "Monthly Natural Gas Liquids Report" for two facilities were combined with data reported for two refineries on Form EIA-810, "Monthly Refinery Report." The primary impact of this reporting change is on Table 18, "Stocks of Crude Oil and Petroleum Products by PAD District," of the *Petroleum Supply Annual*, 1986

**Table B1. New Basis Stocks<sup>1</sup>**  
(Million Barrels)

Commodity	1980	1982	1983
Crude Oil			
Total . . . . .	488	645	723
Other Primary . . . . .	380	351	379
Crude Oil and Petroleum Products . . . . .	1,425	1,461	1,454
Motor Gasoline			
Total . . . . .	263	244	222
Finished . . . . .	214	202	186
Distillate Fuel Oil . . . . .	205	186	140
Residual Fuel Oil . . . . .	91	69	49
Jet Fuel			
Total . . . . .	42	39	39
Kerosene-type . . . . .	36	32	32
Propane/Propylene . . . . .	69	57	55
Liquefied Petroleum Gases . . . . .	128	102	108
Other Petroleum Products . . . . .	207	219	210

<sup>1</sup> Stocks as of December 31.

which showed a decrease in natural gas liquids (NGL) stocks at bulk terminals and natural gas processing plants, and an increase in NGL stocks at refineries.

## Note 9. Descriptive Monthly Statistics

The universe of each of the Petroleum Supply surveys (refinery, bulk terminal, pipeline, crude oil stock, import, etc.) is relatively small and ever-changing due to company formations, shutdowns, mergers and splits. The frequency distributions of the petroleum supply variables are non-normal, highly variable, positive skewed and leptokurtic;

**Table B2. Impact of New Respondents to December 1985 PSM Data**

Product	Refinery Production (thousand barrels per day)		Stocks <sup>a</sup> (thousand barrels)	
	Reported by New Respondents	Published U.S. Total	Reported by New Respondents	Published U.S. Total
Leaded Gasoline	1.3	2,326	224	81,379
Unleaded Gasoline	0.6	4,323	276	108,422
Distillate Fuel Oil	0	3,174	1,217	143,911
Residual Fuel Oil	0	1,055	1,747	50,671
NGLs & LRGs	0	393	409	80,898
Other Products	0	3,302	1,413	239,158
Crude Oil (excl. SPR)	—	—	2,314	318,695

<sup>a</sup> Stocks as of December 31, 1985.



that is, there are many small units and few large ones. Zeros often dominate the responses; that is, not all of the sampling units produce and/or store all products.

The statistics described in Table B3 were calculated from the 1996 monthly surveys and display the following petroleum supply variables:

- (1) The number of active sampling units (respondents).
- (2) The number of sampling units reporting nonzero values (nonzero respondents).
- (3) The average of nonzero values reported in thousand barrels (average).
- (4) The standard deviation of nonzero values reported in thousand barrels (standard deviation).

## **Note 10. Practical Limitations of Data Collection Efforts**

### **Crude Oil Lease Stock Adjustment**

End-of-month crude oil stocks held on leases are reported on the EIA-813, "Monthly Crude Oil Report." However, only those companies that store 1,000 barrels or more of crude oil are required to submit a report. Previous frames analysis has shown that crude oil stocks held on leases reported to the EIA are consistently lower than the lease stocks reported to individual states.

Up until 1983, monthly state government data on lease stocks were substituted for EIA data wherever possible in order to rectify the understatement of lease crude oil stocks. State data were available from three states — Texas, New Mexico, and Montana. To calculate the "lease adjustment," a comparison between EIA reported data and the state government data was made and the difference added to the EIA data for the respective states.

In 1983, the EIA modified the Form EIA-813 to eliminate state data on crude oil stocks and began collecting crude oil stock data by Petroleum Administration for Defense (PAD) District. With this change, the "lease adjustment" could no longer be calculated on a state basis and was changed to a PAD District level.

### **Trans Alaskan Pipeline System Adjustment**

Beginning with the January 1989 data, adjustments are made to refinery inputs and product supplied of natural gas liquids (NGLs) and refinery inputs of crude oil to account for refiner misreporting. Substantial volumes of NGLs are produced at natural gas processing plants in Alaska and injected into the crude oil moving in the Trans

Alaska Pipeline System (TAPS). Refiners receiving any crude oil commingled with NGLs are instructed to report the NGL portion of that stream separately from the crude oil portion. This has not been done for Alaskan crude oil because refiners are unable to identify these volumes for accounting purposes. As a result, the NGL production in Alaska has been credited directly toward product supplied and also toward product supplied from refinery production when the refiner processes the crude oil-NGL mixture. In addition, the reporting of the commingled stream as crude oil by the refiner has overstated crude oil inputs and resulted in an increase in unaccounted for crude oil equal to the volume of NGL in the crude oil.

To offset this reporting error, an adjustment is made to refinery input in all states receiving Alaskan crude oil. The adjustment reduces the crude oil inputs and increases the NGL inputs by an equal amount. Each state adjustment is a portion of the known Alaskan-NGL production that is proportional to the state's share of Alaskan crude oil received at all refineries in the United States. The greatest impact occurs in PAD District V for butane and pentanes plus.

The reporting problem which began in 1987 grew as injections on NGLs into the TAPS increased. Data for 1988 was revised in the *Petroleum Supply Annual* to account for the adjustment.

### **Finished Motor Gasoline Product Supplied Adjustment**

Beginning with the reporting of January 1993 data, adjustments were made to the product supplied series for finished motor gasoline. It was recognized that motor gasoline statistics published by the EIA through 1992 were under-reported because the reporting system was not collecting all fuel ethanol and motor gasoline blending components being blended downstream from the refinery. The EIA was able to quantify these volumes and make corrective adjustments for 1992 in 1993 (refer to Table B4 in the 1994 PSA).

### **Fuel Ethanol Adjustment**

Prior to 1993, an estimated 60 to 70 thousand barrels per day of fuel ethanol were added to motor gasoline to produce gasohol but were not included in the EIA finished motor gasoline production data. In 1992, the EIA attempted to collect these data from downstream fuel ethanol motor gasoline blenders but found that this effort was impractical and the results were inaccurate.

Beginning in January 1993, an estimate for the missing fuel ethanol blended into motor gasoline was calculated (refer to Table B4). This estimate was calculated as production (from the EIA-819M, "Monthly Oxygenate Tele-

Table B3. Descriptive Statistics for Selected Petroleum Supply Variables<sup>1</sup>, 1999

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Refinery Gross Input to Atmospheric Crude Oil Distillation Units</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	151	150	152	151	151	151	151	151	151	150	150	150
Average	3017	2730	3015	3057	3137	3022	3173	3194	3050	3071	3005	3039
Standard Deviation	3030	2748	3103	3084	3159	3054	3129	3135	2991	3088	2994	3090
<b>Refinery Crude Oil Input</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	158	157	160	159	159	159	159	159	160	158	157	157
Average	2834	2555	2809	2848	2919	2822	2971	2983	2833	2862	2810	2845
Standard Deviation	2999	2740	3065	3036	3111	3007	3075	3092	2958	3044	2953	3039
<b>Refinery Finished Motor Gasoline Gross Production</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	165	161	163	155	155	154	156	155	160	164	165	165
Average	1473	1331	1435	1547	1624	1588	1604	1604	1511	1522	1456	1566
Standard Deviation	1573	1371	1518	1569	1630	1595	1569	1568	1597	1612	1495	1652
<b>Refinery Distillate Fuel Oil Gross Production</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	150	151	148	152	150	148	147	151	150	151	152	153
Average	669	617	678	685	726	697	754	711	708	733	725	701
Standard Deviation	669	632	674	677	704	668	701	654	662	733	716	708
<b>Refinery Residual Fuel Oil Gross Production</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	109	107	110	108	109	110	109	111	109	111	114	114
Average	234	201	204	203	223	212	229	218	206	198	173	199
Standard Deviation	343	286	310	296	318	319	326	311	269	274	236	272
<b>Refinery Finished Gasoline Stocks</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	170	169	171	171	173	171	171	171	169	168	166	168
Average	333	332	318	321	301	298	296	281	286	287	287	265
Standard Deviation	358	376	374	365	344	355	346	300	325	313	281	310
<b>Bulk Terminal Finished Motor Gasoline Stocks</b>												
Respondents	288	289	289	287	286	286	286	287	285	284	283	282
Nonzero Respondents	133	133	132	130	130	129	130	131	129	130	128	127
Average	541	524	473	511	526	521	471	455	476	470	523	475
Standard Deviation	1134	1142	1023	1087	1124	1080	933	915	968	944	1069	963
<b>Pipeline Finished Motor Gasoline Stocks</b>												
Respondents	78	78	79	80	80	81	81	82	82	82	82	81
Nonzero Respondents	49	49	50	51	50	49	50	51	49	50	51	49
Average	1063	1047	1003	975	1070	1080	1011	997	1015	991	965	1006
Standard Deviation	2106	2116	2120	2161	2311	2236	2014	2182	2074	2184	2125	2140
<b>Refinery Distillate Fuel Oil Stocks</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	192	190	189	191	191	189	190	190	188	194	191	191
Average	243	232	215	221	225	229	241	245	265	238	233	214
Standard Deviation	418	383	305	303	356	398	457	438	449	407	375	319
<b>Bulk Terminal Distillate Fuel Oil Stocks</b>												
Respondents	288	289	289	287	286	286	286	287	285	284	283	282
Nonzero Respondents	188	186	184	182	176	177	178	180	179	178	179	177
Average	349	360	296	288	335	342	353	371	354	347	363	310
Standard Deviation	696	744	589	573	684	698	736	805	764	741	751	609
<b>Pipeline Distillate Fuel Oil Stocks</b>												
Respondents	78	78	79	80	80	81	81	82	82	82	82	81
Nonzero Respondents	51	51	50	52	53	51	52	52	51	50	52	52
Average	591	575	590	581	561	549	541	530	615	599	620	570
Standard Deviation	1460	1404	1360	1457	1400	1314	1324	1203	1380	1280	1448	1216
<b>Refinery Residual Fuel Oil Stocks</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	123	123	124	123	122	120	122	125	126	124	124	124
Average	161	156	143	147	151	158	166	157	153	156	152	126
Standard Deviation	302	278	207	231	233	240	277	257	268	265	282	198
<b>Bulk Terminal Residual Fuel Oil Stocks</b>												
Respondents	288	289	289	287	286	286	286	287	285	284	283	282
Nonzero Respondents	57	57	55	57	54	55	55	55	53	56	55	53
Average	422	400	394	386	419	439	449	343	401	376	388	378
Standard Deviation	809	780	790	841	883	904	830	694	793	654	679	580
<b>Refinery Crude Oil Stocks</b>												
Respondents	239	238	238	238	239	240	240	239	239	240	240	239
Nonzero Respondents	157	157	159	159	159	159	159	159	159	157	157	157
Average	676	689	683	675	724	671	694	657	634	637	633	593
Standard Deviation	730	758	735	702	764	722	761	741	691	696	701	651
<b>Pipeline/Tank Farm Crude Oil Stocks</b>												
Respondents	168	168	168	168	169	169	170	169	168	167	166	166
Nonzero Respondents	114	114	115	114	113	112	113	114	114	112	111	110
Average	1806	1789	1844	1778	1776	1790	1750	1647	1572	1608	1602	1533
Standard Deviation	3901	3817	3963	3769	3656	3655	3490	3295	3036	3227	3109	3093

<sup>1</sup> The respondent averages and standard deviations exclude zero reporting companies.



**Table B4. Finished Motor Gasoline Product Supplied Adjustment, 1993 to Present  
(Thousand Barrels per Day)**

Item/Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
<b>1993</b>													
Fuel Ethanol Adj.....	61	67	70	61	58	63	62	48	68	69	84	81	66
Motor Gas Blending .....	-59	-61	15	-32	-3	-5	-19	54	79	-72	-72	48	-10
Product Supplied.....	6,639	7,112	7,389	7,435	7,585	7,700	7,785	7,864	7,607	7,382	7,533	7,661	7,476
<b>1994</b>													
Fuel Ethanol Adj.....	86	73	76	71	69	63	65	73	59	90	82	82	74
Motor Gas Blending .....	33	-7	27	58	51	82	98	98	81	-16	56	113	57
Product Supplied.....	6,980	7,275	7,395	7,564	7,644	7,922	7,884	7,975	7,615	7,548	7,464	7,924	7,601
<b>1995</b>													
Fuel Ethanol Adj.....	66	66	79	74	58	81	49	36	57	72	91	58	65
Motor Gas Blending .....	8	37	56	86	131	113	46	110	35	89	28	29	64
Product Supplied.....	7,163	7,481	7,788	7,651	7,894	8,220	7,888	8,187	7,786	7,781	7,866	7,742	7,789
<b>1996</b>													
Fuel Ethanol Adj.....	58	53	50	37	27	14	9	20	22	36	43	39	34
Motor Gas Blending .....	61	75	(s)	-8	43	48	103	52	21	80	60	43	48
Product Supplied.....	7,271	7,599	7,792	7,873	8,071	8,088	8,165	8,343	7,662	8,093	7,915	7,794	7,891
<b>1997</b>													
Fuel Ethanol Adj.....	39	50	51	46	48	38	59	37	47	69	50	61	50
Motor Gas Blending .....	-20	61	-27	87	73	113	89	95	115	107	165	80	78
Product Supplied.....	7,301	7,668	7,796	8,064	8,139	8,288	8,496	8,233	8,023	8,141	7,965	8,065	8,017
<b>1998</b>													
Fuel Ethanol Adj.....	66	55	61	55	42	50	49	58	62	71	55	75	58
Motor Gas Blending .....	84	39	117	140	142	246	111	88	171	89	145	205	132
Product Supplied.....	7,618	7,711	8,004	8,312	8,279	8,520	8,680	8,568	8,310	8,378	8,167	8,451	8,253
<b>1999</b>													
Fuel Ethanol Adj.....	57	52	52	53	50	59	43	54	55	64	66	72	56
Motor Gas Blending .....	81	-13	20	134	46	214	192	128	102	212	156	165	120
Product Supplied.....	7,701	8,031	8,128	8,506	8,420	8,886	8,942	8,579	8,305	8,542	8,240	8,859	8,431

Note: Totals may not equal sum of components due to independent rounding.

Source: • Energy Information Administration, *Petroleum Supply Annual*, Volumes I and II.

phone Report”), plus imports (from the EIA-814, “Monthly Imports Report”), minus inputs at refineries (from the EIA-810, “Monthly Refinery Report”), plus or minus stock change (from the EIA-819M survey). This estimate for the amount of fuel ethanol blended into motor gasoline was added to Table 1 for Natural Gas Liquids Field Production (line 14) and in the Field Production column for finished motor gasoline in Tables 2 through 13 published in the *PSA*.

An estimate for the total amount of gasohol produced with the ethanol is given as 10 times the estimated fuel ethanol blended (this assumes a 10 percent ethanol blend). This amount is added to the column labeled field production of “oxygenated gasoline” and subtracted from the field production of “other” finished gasoline. The PAD District level detail was obtained by allocating the national level estimates according to the percent of gasohol sales from the U.S. Department of Transportation, Federal Highway Administration, Monthly Motor Fuel Reported by States, 1991.

#### Motor Gasoline Blending Component Adjustment

Prior to 1993, the EIA published a “product supplied” for motor gasoline blending components. Since these components are to be blended into finished motor gasoline, there is no actual demand for this intermediate product. The EIA corrected this series by including the quantity of “product supplied” for motor gasoline blending components with “other” finished motor gasoline. This change was accomplished in Tables 2 through 13 by adding product supplied for motor gasoline blending components to the column labeled field production of “other” motor gasoline, and subtracting it from the field production column for “motor gasoline blending components.”

#### Fuel Ethanol Stock Adjustment

Total end-of-month stocks of fuel ethanol are underreported in the PSRS because of the inability to collect data from downstream fuel ethanol motor gasoline blenders. Total stocks of fuel ethanol are assumed to be those reported by ethanol producers on the Form EIA-819M,



"Monthly Oxygenate Telephone Report." The difference between the stocks reported on the EIA-819M and the stocks reported in the PSRS (from refiners, bulk terminal and pipeline operators) is added to the stocks shown for bulk terminals. If the stocks for the PSRS are higher than those reported on the EIA-819M, no adjustment is made.

## Note 11. 1981 Changes in the Petroleum Supply Reporting System

Petroleum statistics for all years through 1980 were developed using definitions, concepts, reporting procedures, and aggregation methods that are consistent with those developed by the U.S. Bureau of Mines. Research conducted by the Energy Information Administration (EIA) in 1979 and 1980 indicated that changes had occurred in the petroleum industry that were not being adequately reflected in EIA's reporting system.

The EIA reporting forms, definitions, and procedures were modified beginning in January 1981 to describe industry operations more accurately. Unfortunately, empirical information is not available to precisely measure the data shortcomings through 1980. Estimates of the magnitudes of differences in the major data series are described below to form a basis for comparing 1979, 1980, and 1981 data.

### Motor Gasoline

Prior to 1979, the EIA product-supplied series for motor gasoline was consistently about 2 percent lower than the Federal Highway Administration (FHWA) gasoline sales data series, which is derived from State tax receipts. The difference increased to about 3 percent in 1979 and 1980. There were two primary causes for this growing difference. First, refinery operations, particularly the flows of unfinished oils and the redesignation of some finished products, were not being accurately described on the EIA survey forms. Second, a large amount of gasoline was being produced away from refineries at "downstream blending stations" to take advantage of provisions in regulations governing the amount of lead that could be added. These blending stations were not reporting gasoline production to the EIA until the data system was changed in January 1981.

Quantitative estimates of the magnitude of the difference in EIA's gasoline product supplied data in 1979 and 1980 have been made by the EIA and the American Petroleum Institute (API). Table B5 provides 1979 and 1980 data as published in the *Petroleum Statement, Annual*, as well as EIA and API estimates of "recast" motor gasoline product supplied.

The EIA recast estimates were based upon preliminary monthly information in the *Monthly Petroleum Statement*. The ranges displayed in the EIA column reflect uncertainty in the estimates. Also shown are the FHWA motor gasoline sales statistics for those years.

Table B5. Finished Motor Gasoline Product Supplied  
(Thousand Barrels per Day)

	EIA Reported	API Recast	EIA Recast	FHWA <sup>a</sup>
1979 . . . . .	7,034	7,302	7,183-7,347	7,258
1980 . . . . .	6,579	6,882	6,806-6,889	6,792

<sup>a</sup> FHWA gasoline statistics based on data from Federal Highway Administration, *Estimate of Total Gasoline Use*, Table MF-21A published October 1980 and September 1981. Aviation gasoline (Table MF-24) has been subtracted from FHWA product supplied quantities to make data comparable.

### Distillate and Residual Fuel Oil

Distillate and residual fuel oil refinery production statistics through 1980 were adjusted to account for an imbalance between unfinished oil supply and disposition. The reported quantities of refinery inputs of unfinished oils typically exceed the available supply of unfinished oils. It has been assumed that this occurs when distillate and residual fuel oils produced by a refinery are shipped to another refinery, where it is treated as unfinished oil. This oil is then reprocessed rather than used or sold as distillate or residual fuel oil.

For many years (including 1980), the difference between unfinished oil disposition and supply was subtracted from distillate and residual fuel oil production to adjust for this discrepancy. Two-thirds of the difference was applied to distillate fuel oil, and one-third to residual fuel oil.

Table B6. Distillate and Residual Fuel Oil  
Production and Product Supplied  
(Thousand Barrels per Day)

	Adjusted Refinery Production	Unadjusted Refinery Production	Difference	Unadjusted Product Supplied
Distillate Fuel Oil				
1979 . . . . .	3,152	3,169	16	3,327
1980 . . . . .	2,661	2,764	103	2,969
Residual Fuel Oil				
1979 . . . . .	1,687	1,695	8	2,834
1980 . . . . .	1,580	1,634	54	2,562

Beginning in January 1981, this adjustment was discontinued because there was not sufficient empirical evidence to support it. Table B6 presents distillate and residual fuel oil refinery production in 1979 and 1980 as published (adjusted) and on the same basis as 1981 statistics (unadjusted) to permit comparison.

Adjusted distillate and residual fuel oil product supplied volumes differ from the unadjusted volumes by the same amounts as the adjusted and unadjusted production volumes.

### **Total Petroleum Products**

The imbalance between the supply and disposition of unfinished oils and gasoline blending components is included with other products (line 35) in Table 1. These imbalances are reported as negative product supplied in Table 2. Since these changes only involve redistribution of the volumes of finished motor gasoline, distillate and residual fuel oil, gasoline blending components, and unfinished oils, the total volume of petroleum products supplied remains unaffected by them.

### **Alaskan In Transit Stocks**

Stocks of Alaskan crude oil in-transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock change calculations. Using the expanded coverage (new basis), 1980 end-of-year crude oil stocks would have been 488 million barrels (Total) and 380 million barrels (Other Primary).

## **Note 12. 1983 Changes in the Petroleum Supply Reporting System**

January 1983 marked the implementation of recent changes in the collection, processing and availability of the Energy Information Administration's (EIA) petroleum supply data. Survey forms and definitions were made consistent; frames for bulk terminals, petroleum product pipelines and crude oil stock holders were updated, and the survey processing system was redesigned and incorporated into the new Petroleum Supply Reporting System (PSRS).

### **Changes in Data Collection**

Changes in data collection can be grouped into five categories. Some were made to improve consistency, others to classify activity more precisely, and others to combine or eliminate information elements or to reduce the frequency of reporting in recognition of the trade-off between data value and reporting burden. The changes are itemized below.

- Motor gasoline was divided into three standard categories (finished leaded motor gasoline, finished unleaded motor gasoline and motor gasoline blending components).
- Aviation gasoline blending components were added to Form EIA-817.
- Crude oil burned as fuel on leases and by pipelines is reported as a single item on Form EIA-813. Previously it was reported as distillate or residual fuel oil consumption.
- Number 4 Fuel Oil is now included with distillate fuel oil.
- Gasohol was eliminated as a separate category and is now reported as either "finished leaded motor gasoline" or "finished unleaded motor gasoline."
- Waterborne movements of petrochemical feedstocks are now divided into naphtha-less than 401 degrees end-point and other-oils equal to or greater than 401 degrees end-point on Form EIA-817.
- Data aggregation for Petroleum Administration for Defense District (PADD) I was divided into three subdistricts on Forms EIA-812 and 817.
- Detailed categories of Gross Input to Crude Oil Distillation Units were eliminated, and only Total Gross Inputs are collected on Form EIA-810.
- Waterborne movements of crude oil and petroleum products between PADDs, on Form EIA-817, no longer reflect shipping and receiving States.
- Reporting of production and stocks of Number 4 Fuel Oil by sulfur levels were eliminated from Forms EIA-810, 811, 812, and 817.
- Crude oil stocks are collected at PADD levels rather than State levels on Form EIA-813.
- Shipments from natural gas processing plants no longer reflect destination by facility type on Form EIA-816.
- The four categories for unfinished oils were reduced to two on Form EIA-810.
- The five categories for sulfur content of residual fuel oil were reduced to three on Forms EIA-810, 811, and 817.
- Normal Butane and Other Butanes were combined into a single category on Forms EIA-810, 811, and 816.



- Three subcategories of lubricating oils (bright stock, neutral, and other) were combined into a single category on the Form EIA-810.
- Three subcategories of waxes (microcrystalline, crystalline-fully refined, and crystalline-other) were combined into a single category on the Form EIA-810.
- Asphalt and Road Oil were combined into a single category on Forms EIA-810 and 811.
- Plant fuel use and Losses were combined on Form EIA-816.
- Natural Gasoline and Isopentane were combined on Form EIA-816.

#### Change in Crude Oil Lease Stocks

The end-of-month crude oil stocks held on leases are reported on the Form EIA-813, "Monthly Crude Oil Report." However, only those companies that store 1,000 barrels or more of crude oil are required to submit a report. Previous frames analysis has shown that crude oil stocks held on leases reported to the Energy Information Administration (EIA) are consistently lower than the lease stocks reported to individual states.

Up until 1983, monthly state government data on lease stocks were substituted for EIA data wherever possible in order to rectify the understatement of lease crude oil stocks. State data were available from three states — Texas, New Mexico, and Montana. To calculate the "lease adjustment", a comparison between the EIA reported data and the state government data was made and the difference added to the EIA data for respective states.

In 1983, the EIA modified the Form EIA-813 to eliminate state data on crude oil stocks and began collecting crude oil stock data by PAD District. With this change, the "lease adjustment" could no longer be calculated on a state basis and was changed to a PAD District level.

#### Note 13. 1984 Changes in the Petroleum Supply Reporting System

In January 1984, a number of changes in the reporting of natural gas liquids (NGLs) were implemented. The modified system reflects supply and disposition of NGL on a component, rather than a product, basis.

From 1979 to 1983, the Energy Information Administration (EIA) collected and reported information on the supply and disposition of nine NGL products. Beginning with January 1984, NGL supply and disposition data were re-

ported for 5 components to be consistent with record keeping practices used by the industry. Table B7 shows the product category under the new and old basis. Four Petroleum Supply Reporting System surveys were modified beginning in January 1984. They were:

EIA-810	"Monthly Refinery Report"
EIA-811	"Monthly Bulk Terminal Report"
EIA-812	"Monthly Product Pipeline Report"
EIA-816	"Monthly Natural Gas Liquids Report"

This change affected stocks reported and stock change calculations. Under the new basis, end-of-year 1983 stocks would have been 108 million barrels (Liquefied Petroleum Gases) and 210 million barrels (Other Petroleum Products).

Table B7. Product Basis vs. Component Basis Reporting

1979-1983 Product Basis	1984 Component Basis				
	Ethane	Propane	Normal Butane	Isobutane	Pentanes Plus
Ethane	•				
Ethane-Propane Mixtures	•	•			
Propane		•			
Butane-Propane Mixtures		•	•		
Butane			•		
Isobutane				•	
Unfractionated Stream	•	•	•	•	•
Natural Gasoline and Isopentane					•
Plant Condensate					•

A fifth survey, Form EIA-814, "Monthly Imports Report" (formerly Form ERA-60), was not modified. Therefore, in order to allocate imports and exports of mixed NGL streams to individual component parts, the EIA developed a statistical algorithm.

#### Imports

The imports algorithm was based on information gathered from the larger importers of NGL, who were asked to provide component analysis of the products they imported during the first 6 months of 1983. The percentages shown in Table B8 are derived from the weighted averages of the data provided by the importers.



Table B8. Algorithm for Allocating NGL Imports/Exports  
(Percent)

Product	EIA Component Slate				
	Ethane	Propane	Normal Butane	Isobutane	Pentanes Plus
<b>Import Product</b>					
Natural Gasoline and Isopentane (EIA-814) . . .	—	—	—	—	100
Plant Condensate (EIA-814) . . . . .	—	—	—	—	100
Ethane (IM-145) . . . . .	100	—	—	—	—
Propane (IM-145) . . . . .	—	100	—	—	—
Butane (IM-145) . . . . .	—	—	65	35	—
Butane-Propane Mixtures (IM-145) . . . . .	—	40	35	20	5
Ethane-Propane Mixtures (IM-145) . . . . .	60	40	—	—	—
<b>Export Product</b>					
Ethane (All PAD Districts) . . . . .	100	—	—	—	—
Propane (All PAD Districts) . . . . .	—	100	—	—	—
Butane (All PAD Districts) . . . . .	—	—	100	—	—
<b>Mixed Streams</b>					
PAD Districts I, IV, V . . . . .	—	40	60	—	—
PAD District II . . . . .	30	25	15	15	15
PAD District III . . . . .	—	80	20	—	—

## Exports

The exports algorithm was based on information gathered from the larger exporters of NGL, who were asked to provide component analysis of the products they exported during 1983. The percentages shown in Table B8 are derived from the weighted averages of the data provided by the exporters. It was necessary to derive percentages by Petroleum Administration for Defense Districts of exportation, due to the wide variation of components included in the mixed streams.

## Note 14. 1985 Changes in the Petroleum Supply Reporting System

Beginning in January 1985, inter-Petroleum Administration for Defense (PAD) District pipeline movements of crude oil were included in the crude oil supply balance at the PAD District level but did not affect National level statistics. As a result of including these movements, *Net Receipts* of crude oil and *Unaccounted for Crude Oil* at the PAD District level changed significantly. Also affected were crude oil imports and unfinished oil imports at the PAD District level which are provided by *PAD District of Entry* (Tables 4-8) and by *PAD District of Processing* (Table 14).

The tables in the *Petroleum Supply Annual* that were changed due to the inclusion of inter-PAD District pipeline movements of crude oil are listed below:

- Tables 4 through 8, "PAD Districts I to V, Supply and Disposition of Crude Oil and Petroleum Products."
  - Effective January 1985, crude oil imports and unfinished oil imports in Tables 4 through 8 were reported at the *PAD District of Entry* rather than at the *PAD District of Processing*. *Net Receipts* now include movements by pipeline as well as by tanker and barge.
- Table 20, "Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts."
  - The crude oil line includes movements by pipeline as well as by tanker and barge.
- Table 21, "Movements of Crude Oil and Petroleum Products by Pipeline Between PAD Districts."
  - A line was added to report crude oil movements.

- Table 23, "Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts."

- The crude oil line includes movements by pipeline as well as by tanker and barge.

## Note 15. 1986 Changes in the Petroleum Supply Reporting System

Beginning in January 1986, several changes to the Petroleum Supply Reporting System (PSRS) went into effect. These changes affected the frame of operators of petroleum facilities required to complete the monthly surveys in the PSRS and resulted in some changes to the tables presented in the *Petroleum Supply Monthly* and were subsequently published in the *Petroleum Supply Annual* (PSA). Refer to Explanatory Note 8 for a detailed description of frames maintenance and updates.

### Changes in Data Collection

- The unit of measure used on Form EIA-814, "Monthly Imports Report," has been changed from barrels to thousands of barrels.
- Unfinished oil imports data, previously reported as one product on the Form EIA-814, are now reported separately under four classifications. These classifications are:
  - Naphthas and lighter
  - Kerosene and light gas oils
  - Heavy gas oils
  - Residuum
- The number of categories for reporting natural gas liquids and liquefied petroleum gases data on Form EIA-814 was reduced from 19 to 5 by eliminating the requirement to separately identify categories for further processing, petrochemical use, and fuel use.
- The requirements to report the type of processing facility and the applicable section of the oil import regulations were eliminated for the Form EIA-814.
- The requirement to report data for imports of crude oil, unfinished oils, and finished products on separate schedules of the Form EIA-814 was eliminated.
- The requirement to report two end-use categories, petrochemical use and other use, for still gas and liquefied refinery gases, was eliminated on Form EIA-810, "Monthly Refinery Report."
- Form EIA-815, "Monthly Shipments from Puerto Rico to the United States Report," was discontinued. The

data previously reported on this form are now reported on Form-814.

### Changes in Publication Tables

Several changes were also made to tables in the *PSA* either as a direct result of changes in reporting requirements or to improve the usefulness of the publication. These changes were:

- Table 11, "Refinery Input of Crude Oil and Petroleum Products by PAD District."
  - Alaskan crude oil receipts were shown separately.
- Table 12, "Refinery Production of Petroleum Products by PAD District."
  - The breakout between "petrochemical feedstock use" and "other use" were no longer shown separately for still gas or for liquefied refinery gases.
- Table 14, "Imports of Crude Oil and Petroleum Products by PAD District."
  - Imports of unfinished oils were separated into four categories: naphthas and lighter, kerosene and light gas oils, heavy gas oils, and residuum.
- Table 15, "Imports of Crude Oil and Petroleum Products by Source."
  - Countries formerly included in the categories "Other Western Hemisphere" and "Other Eastern Hemisphere" were shown individually.
- Table 18, "Stocks of Crude Oil and Petroleum Products by PAD District."
  - The breakout between "petrochemical feedstock use" and "other use" for each liquefied petroleum gas was eliminated.

## Note 16. 1987 Changes in the Petroleum Supply Reporting System

Several changes to the Petroleum Supply Reporting System went into effect at the beginning of January 1987. These changes were made as part of the Energy Information Administration's (EIA's) continuing effort to provide pertinent, timely, and consistent energy information. These changes were subsequently reflected in the *Petroleum Supply Annual* (PSA).



### Changes in Data Collection

Fresh feed input to catalytic cracking units, hydrocracking units, and cokers were added to the Form EIA-810, "Monthly Refinery Report."

### Changes in Publication Tables

- The "Appalachian No. 2" Refining District was combined with the "Indiana, Illinois, Kentucky," Refining District. This affected *PSA* Tables 10 through 13, 18, 24, and 25.
- Fresh feed inputs to catalytic cracking units, hydrocracking units, and cokers were added to Table 11, "Refinery Input of Crude Oil and Petroleum Products by PAD District."

### Clarification

In 1986, several refineries and terminals in the United States applied for Foreign Trade Zone (FTZ) status and applications from three refineries were approved. Consequently, during 1986, some refineries with FTZ status were treated as if they were within the United States while the Hawaiian FTZ was considered outside.

Effective with the January 1987 data, all FTZ facilities located within the 50 United States are considered domestic entities and are included in *PSA* statistics. The principal differences in the *PSA* data series as a result of adding the Hawaiian FTZ was an approximate 1 percent increase in crude imports and a 3 percent decrease in product imports.

## Note 17. 1989 Changes in the Petroleum Supply Reporting System

Several changes to the Petroleum Supply Reporting System (PSRS) went into effect at the beginning of January 1989. These changes were made to reduce respondent burden, to fulfill user requests for additional data, and to improve accuracy and consistency in reporting. To reflect these changes and to improve the usefulness of the *Petroleum Supply Monthly* (PSM) publication, the following changes were made in January 1989 and are subsequently reflected in the *Petroleum Supply Annual* (PSA) publication.

### Changes in Data Collection

- Data on inputs and production of naphthenic and paraffinic lubricants were added to the Form EIA-810, "Monthly Refinery Report."

- Separate lines for the collection of inputs and production of olefins (ethylene, propylene, and butylene) were added to Form EIA-810, "Monthly Refinery Report."
- The collection of data on the movement of Liquefied Petroleum Gases (LPGs) and Liquefied Refinery Gases (LRGs) on a component basis were added to the Forms EIA-812, "Monthly Product Pipeline Report," and the EIA-817, "Monthly Tanker and Barge Movement Report."
- Bonded imports of jet fuel and fuel oils and imports of LPGs previously published from data provided by the U.S. Bureau of the Census were discontinued. Data are now published from the data reported on the Form EIA-814, "Monthly Imports Report."
- Exports of butane/propane and ethane/propane mixtures were split in a ratio of 60 percent for the butane and ethane portions and 40 percent for the propane portion.
- The reporting of products other than Natural Gas Liquids (NGLs) by natural gas processing plants was eliminated on the Form EIA-816, "Monthly Natural Gas Liquids Report."
- Fractionators were required to report only end-of-month stocks of NGLs on the Form EIA-816, "Monthly Natural Gas Liquids Report."

### Changes in Natural Gas Liquids and Crude Oil Statistics

Beginning with the January 1989 issue of the *PSM*, adjustments were made to refinery inputs and product supplied of NGLs and refinery inputs of crude oil to account for refiner misreporting. Substantial volumes of NGLs are produced at natural gas processing plants in Alaska and injected into the crude oil moving in the Trans Alaska Pipeline System (TAPS). Refiners receiving any crude oil commingled with NGLs are instructed to report the NGL portion of that stream separately from the crude oil portion. This has not been done for Alaskan crude oil because refiners are unable to identify these volumes for accounting purposes. As a result, the NGL production in Alaska has been credited directly toward product supplied and also toward product supplied from refinery production when the refiner processes the crude oil-NGL mixture. In addition, the reporting of the commingled stream as crude oil by the refiner has overstated crude oil inputs and resulted in an increase in unaccounted for crude oil equal to the volume of NGL in the crude oil.

To offset this reporting error, an adjustment was developed affecting refinery input in all Petroleum Administration for Defense (PAD) Districts receiving Alaskan

Table B9. Conversion Table for 1989 PSA

Table Numbers									
Old	New	Old	New	Old	New	Old	New	Old	New
1	1	NA	9	12, 24	17	15	25	21	33
2	2	7	10	18, 25	18	27	26	22, 26	34
3	3	NA	11	13	19	16	27	23	35
4	4	8	12	14, 27	20	17	28		
NA	5	NA	13	15	21	NA	29		
5	6	9	14	15	22	18, 25	30		
NA	7	10	15	15	23	19	31		
6	8	11	16	15	24	20	32		

NA = Not Applicable

crude oil. The adjustment reduces the crude oil inputs and increases the NGL inputs by an equal amount. Each PAD District adjustment is a portion of the known Alaskan NGL production that is proportional to the PAD District's share of Alaskan crude oil received at all refineries in the United States. The greatest impact occurs in PAD District V for butane and pentanes plus.

The reporting problem began in 1987 and has grown as injections of NGLs into the TAPS have increased. Data for 1988 was revised to account for the adjustment in the PSA.

#### Changes in Publication Tables

- "Stock Withdrawal" was renamed "Stock Change" and was moved from Supply to Disposition in Tables 2 through 13. A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.
- A jet fuel total line was added to Tables 2-13, 17, 18, 20, 32-35.
- PAD District Supply and Disposition tables (Tables 4 through 13) now display liquefied petroleum gases on a component basis.
- A table showing net imports by country for the current month (Table 29) was added.
- Table numbers were changed as a result of data additions and table reorganization. Table B9 is provided to show the new to old table numbers for the detailed statistics tables.
- Table 15, "Natural Gas Plant Net Production and Stocks of Petroleum Products by PAD and Refining District."
  - Stocks at natural gas processing plants by Refining District previously published on Table 10 was included with net production of petroleum products at natural gas plants.
- Table 17, "Net Refinery Production of Finished Petroleum Products by PAD and Refining District."
  - The reporting of products other than natural gas liquids by natural gas processing plants was eliminated.
  - Net production of olefins (ethylene, propylene, and butylene) was added.
  - Net production of naphthenic and paraffinic lubricants was added.
  - Net production of residual fuel oil by percent sulfur, previously published as Table 24, was added.
- Table 18, "Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining District."
  - Stocks at refineries by Refining District were added from Table 18.
  - Stocks of residual fuel oil by percent sulfur content, previously published as Table 25, were added.
- Tables 21 through 25, "Imports of Crude Oil and Petroleum Products by Country of Origin."
  - Data previously included in the "Other Products" category were displayed separately for naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, lubricants, and asphalt and road oil.
- Table 20, "Imports of Crude Oil and Petroleum Products by PAD District."



- Sulfur content categories for residual fuel oil, previously published as Table 27, were added.
- Table 28, “Exports of Crude Oil and Petroleum Products by Destination.”
  - Data for exports by destination previously included in the Other Products category were displayed separately for pentanes plus, kerosene, naphthas for petrochemical feedstock use, and other oils for petrochemical feedstock use.
- Table 30, “Stocks of Crude Oil and Petroleum Products by PAD District.”
  - Refining District data were eliminated. Refinery stocks and natural gas processing plant stocks by Refining District were added to Table 18.
  - Sulfur content categories for residual fuel oil, previously published as Table 25, were added.

## Note 18. 1990 Changes in the Petroleum Supply Reporting System

Beginning with the May 1990 issue of the *Petroleum Supply Monthly* (PSM), stocks of propane/propylene were added to Table 42, “Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products by State.” This change is also reflected in the corresponding table in the *Petroleum Supply Annual* (PSA).

Beginning with the 1991 March issue of the *PSM*, several changes were made to the Petroleum Supply Reporting System to provide additional data and to improve the usefulness of the publication. Although these changes were made in 1991, these changes have been incorporated into the 1990 *PSA* to provide consistent energy information.

### Changes in Publication Tables

#### Summary Statistics Tables

- A new table (Table S7) has been added to display jet fuel supply and disposition.
- Table S8, “Other Petroleum Products Supply and Disposition” has been redesignated as Table S9. Jet fuel data are no longer included. Historical data have been revised to exclude jet fuel.
- Table S3, “Crude Oil and Petroleum Product Imports” has been expanded to display all Organization of Petroleum Exporting Countries (OPEC) and additional Non-

OPEC countries. A separate column for crude oil imports has also been added for each country.

- Time periods have been included in table titles.

#### Figures

- Time periods have been included in figure titles.
- Sources have been provided for each figure.
- Bar graphs used to display end-of-month stocks have been replaced with line graphs.

#### Sources

The sources and explanatory notes for this section have been updated and are now located at the end of the Summary Statistics section.

#### Detailed Statistics Tables

- Table 1, “U.S. Petroleum Balance”
  - A line has been added to display jet fuel as a separate category for Total Products Supplied and Total Stocks (Lines 34 and 44, respectively).
- Imports of Crude Oil and Petroleum Products by PAD District
  - Residual fuel oil sulfur categories have been added.
- Imports of Crude Oil and Petroleum Products by Country of Origin
  - Residual fuel oil sulfur categories by country of origin have been eliminated. These categories are now reported on a PAD District basis.
  - Separate daily average columns have been added for crude oil and petroleum products.

## Note 19. 1993 Changes in the Petroleum Supply Reporting System

In keeping with the Department of Energy’s (DOE’s) mandated responsibilities, the Energy Information Administration (EIA) made several changes to the Petroleum Supply Reporting System (PSRS) effective in January 1993. These changes were designed to accommodate the revisions to the Clean Air Act of 1990, and to reflect current and upcoming changes in the petroleum industry. These changes are subsequently reflected in the 1993 *Petroleum Supply Annual*.

## Changes in Data Collection

- Motor gasoline categories have been revised to reflect the change in the type of fuels produced. The new categories are: reformulated gasoline, oxygenated gasoline, and other finished gasoline. These changes were made to Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-814, "Monthly Imports Report," and EIA-817, "Monthly Tanker and Barge Movement Report."
- Distillate Fuel Oil has been split into two sulfur categories to meet Environmental Protection Agency requirements effective in October 1993. The new categories for inputs, production, end-of-month stocks and movements are: 0.05% sulfur and under, and greater than 0.05% sulfur. These changes were made to Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-814, "Monthly Imports Report," and EIA-817, "Monthly Tanker and Barge Movement Report."
- Other hydrocarbons, hydrogen, and alcohol (Code 090) has been renamed "Other hydrocarbons, hydrogen, and oxygenates" on Form EIA-810, "Monthly Refinery Report." A new line has also been added to report Other hydrocarbons and hydrogen separately.
- Data on inputs and end-of-month stocks of oxygenates (i.e., fuel ethanol, ethyl tertiary butyl ether (ETBE), methanol, methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates) has been added to Form EIA-810, "Monthly Refinery Report."
- Inputs and production of Isobutylene (Code 634) has been added as sub-categories to Isobutane (Code 615) on Form EIA-810, "Monthly Refinery Report."
- Data on inputs and production of military kerosene-type jet fuel and commercial kerosene-type jet fuel has been added to Form EIA-810, "Monthly Refinery Report."
- Liquefied Petroleum and Refinery Gases column headings for Ethane, Propane, Normal Butane, and Isobutane have been revised to include olefins (e.g., Ethane/Ethylene etc.) on Form EIA-811, "Monthly Bulk Terminal Report."
- Data on end-of-month stocks of oxygenates (i.e., fuel ethanol, ethyl tertiary butyl ether (ETBE), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates) have been added to Forms EIA-811, "Monthly

Bulk Terminal Report," and EIA-812, "Monthly Product Pipeline Report." Data for methanol are not collected at this time but has been included on the form for future use.

- Imports of oxygenates (i.e., fuel ethanol, ethyl tertiary butyl ether (ETBE), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates) have been added to Form EIA-814, "Monthly Imports Report." Data for methanol are not requested at this time.
- Imports of olefins are collected separately from liquefied petroleum gases (i.e., ethylene, propylene, butylene, and isobutylene) on Form EIA-814, "Monthly Imports Report."
- Data on oxygenates blended into motor gasoline has been eliminated on the Form EIA-819M, "Monthly Oxygenate Telephone Report."
- Data on methanol is no longer required on the Form EIA-819M, "Monthly Oxygenate Telephone Report" but remains on the form for future use.

## Changes in Summary Statistics Tables

- Table S1. Crude and Petroleum Products Overview
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Table S2. Crude Oil Supply and Disposition
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
  - The Crude Used Directly column has been eliminated. This column is no longer applicable since the years 1973 through 1980 have been eliminated. The data for 1981 and 1982 are provided in a footnote.
- Table S3. Crude Oil and Petroleum Product Imports
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
  - The Former USSR has been renamed Russia. The remaining states that comprised the Former USSR have been included in the Other Non-OPEC column.
- Table S4. Finished Motor Gasoline Supply and Disposition



- History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Product supplied-unleaded and product supplied-unleaded (percent of Total) columns have been eliminated. A new column has been added to display end-of-month stocks of oxygenates. These stocks are not included in the Total Motor Gasoline end-of-month stocks.
- Table S5. Distillate Fuel Oil Supply and Disposition
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
  - Distillate fuel oil stocks have been separated into two sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur).
  - The Crude Used Directly column has been eliminated. This column is no longer applicable since the years 1973 through 1980 have been eliminated. The data for 1981 and 1982 are provided in a footnote.
- Table S6. Residual Fuel Oil Supply and Disposition
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
  - The Crude Used Directly column has been eliminated. This column is no longer applicable since the years 1973 through 1980 have been eliminated. The data for 1981 and 1982 are provided in a footnote.
- Table S7. Jet Fuel Supply and Disposition
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Table S8. Propane/Propylene Supply and Disposition
  - A new summary table has been added to display supply and disposition data for propane/propylene. This information will continue to be included in the Liquefied Petroleum Gases Supply and Disposition table (renumbered as Table S9).
- Table S9. Liquefied Petroleum Gases Supply and Disposition
  - Formerly numbered as Table S8.
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Table S10. Other Petroleum Products Supply and Disposition
  - Formerly numbered as Table S9.
  - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.

#### Changes in Detailed Statistics Tables

- Table 1. U.S. Petroleum Balance
  - Line 14 includes fuel ethanol blended into finished motor gasoline. This quantity is comparable to the sum of field production of finished motor gasoline and natural gas liquids and LRGs on Table 2.
  - Line 20 has been modified to read: Other Liquids New Supply (Field Production) to accommodate motor gasoline blending components field production.
- Tables 2 through 13. Supply and Disposition
  - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
  - Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/Hydrogen/Oxygenates for clarification.
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
  - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 16. Refinery Input
  - Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other Hydrocarbons/Hydrogen and for Oxygenates.
  - Oxygenates are displayed separately for fuel ethanol, methanol, MTBE, and other oxygenates. Other oxygenates includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and

ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

- Table 17. Refinery Net Production

- Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification. Isobutylene is displayed as a sub-category to be consistent with the other liquefied gases.
- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Military and commercial kerosene-type jet fuel has been added.
- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.

- Table 18. Refinery Stocks

- Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
- Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other Hydrocarbons/Hydrogen and for Oxygenates.
- Oxygenates are displayed separately for fuel ethanol, methanol, MTBE, and other oxygenates. Other oxygenates includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).
- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.

- Table 20. Imports by PAD District

- Data on olefins are displayed separately from liquefied petroleum gases.
- Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other Hydrocarbons/Hydrogen and for Oxygenates.

- Oxygenates are displayed separately for fuel ethanol, MTBE, and other oxygenates. Other oxygenates includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.

- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added to both bonded ship bunkers and other.

- Tables 21-25. Imports by Country of Origin

- A new line has been added to appear below the Total line to show the sum of the Persian Gulf countries.
- Former USSR has been changed to read Russia. States formerly included in USSR are now included in the Other countries category under Non-OPEC.

- Table 27. Exports

- Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
- Other Hydrocarbons/Oxygenates and Motor Gasoline Blending Components have been added as export products under the Other Liquids category.

- Table 28. Exports by Destination

- Miscellaneous products category has been renamed Other Products to accommodate exports of other hydrocarbons/ oxygenates and motor gasoline blending components.

- Table 29. Net Imports

- A new line has been added to appear below the Total line to show the sum of the Persian Gulf countries.
- Former USSR has been changed to read Russia. States formerly included in USSR are now included in the Other countries category under Non-OPEC.

- Table 30. Stocks

- Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other hydrocarbons/hydrogen fuel ethanol, ETBE, methanol, MTBE, and other oxygenates.



- Other oxygenates includes tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).
- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 31. Refinery, Bulk Terminal, and Natural Gas Plant Stocks
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
  - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 32. Movements by Pipeline, Tanker, and Barge
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
  - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 33. Movements by Pipeline
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
  - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 34. Movements by Tanker and Barge
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
  - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 35. Net Movements

- Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.

#### Changes in Appendix C (PSM)

- Inputs
  - Other hydrocarbons has been renamed Other Hydrocarbons/Oxygenates for clarification.
- Production
  - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
  - A new line has been added to display field production of motor gasoline blending components.
- Imports
  - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Stocks
  - Other hydrocarbons has been renamed Other Hydrocarbons/Oxygenates for clarification.
  - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
  - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Product Supplied
  - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.

- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.

#### **Changes in Appendix D**

- **Table D1. U.S. Summary Table**

- Data on oxygenates blended into motor gasoline has been eliminated. This information is no longer collected on the survey EIA-819M, "Monthly Oxygenate Telephone Report."

- **Table D2. Monthly Fuel Ethanol Production and Ending Stocks**

- Data for the previous year as well as current year are displayed.
- Data on oxygenates blended into motor gasoline has been eliminated. This information is no longer collected on the survey EIA-819M, "Monthly Oxygenate Telephone Report."
- Data for fuel ethanol imports has been dropped due to small volumes reported by respondents.

- **Table D3. Monthly MTBE Production and Ending Stocks**

- Data for the previous year as well as current year are displayed.
- Data on oxygenates blended into motor gasoline has been eliminated. This information is no longer collected on the survey EIA-819M, "Monthly Oxygenate Telephone Report."
- Data on MTBE imports has been dropped from the table due to small volumes reported by respondents.

#### **Note 20. 1994 Changes in the Petroleum Supply Reporting System**

Effective with January 1994 data, several enhancements were made to the tables to reflect changes in the petroleum industry and to provide more meaningful petroleum statistics. These changes primarily affect data reported for imports, exports, and product supplied.

- On December 31, 1992, Ecuador withdrew as a member of the Organization of Petroleum Exporting Countries (OPEC). As of January 1994, imports of petroleum from Ecuador now appear under imports from Non-OPEC sources. No revision was made to 1993 data. This change is evident in Tables S3 and 35 through 44, 49 and 50.
- Exports data are now published for oxygenates and the sub-categories of finished motor gasoline (reformulated, oxygenated, and other) and distillate fuel oil (0.05% sulfur and under, and greater than 0.05% sulfur).
- Product supplied is now calculated for reformulated, oxygenated, and other finished motor gasoline as well as the sulfur categories of distillate fuel oil (0.05% sulfur and under, and greater than 0.05% sulfur).

#### **Note 21. 1995 Changes in the Petroleum Supply Reporting System**

- Annual U.S. refinery capacity data collection and publication normally presented each year in Volume 1 of the PSA has been moved to a biennial schedule (every other year). Collection and publication of January 1, 1996 refinery capacity data did not occur.
- Annual U.S. oxygenate production capacity data collection and publication normally presented each year in Volume 1 of the PSA has been eliminated. This information was first collected by EIA to effectively monitor the transition of reformulated motor gasoline into the market.

#### **Note 22. 1997 Changes in the Petroleum Supply Reporting System**

- During 1997, Zaire became the Democratic Republic of the Congo. Zaire has been changed to read Congo (Kinshasa). This change is evident in Tables 21 through 25, and Table 29.

#### **Note 23. 1999 Changes in the Petroleum Supply Reporting System**

- U. S. refinery capacity data collection and publication presented in Volume 1 of the PSA has been moved back to an annual schedule, effective with January 1, 2000 data.

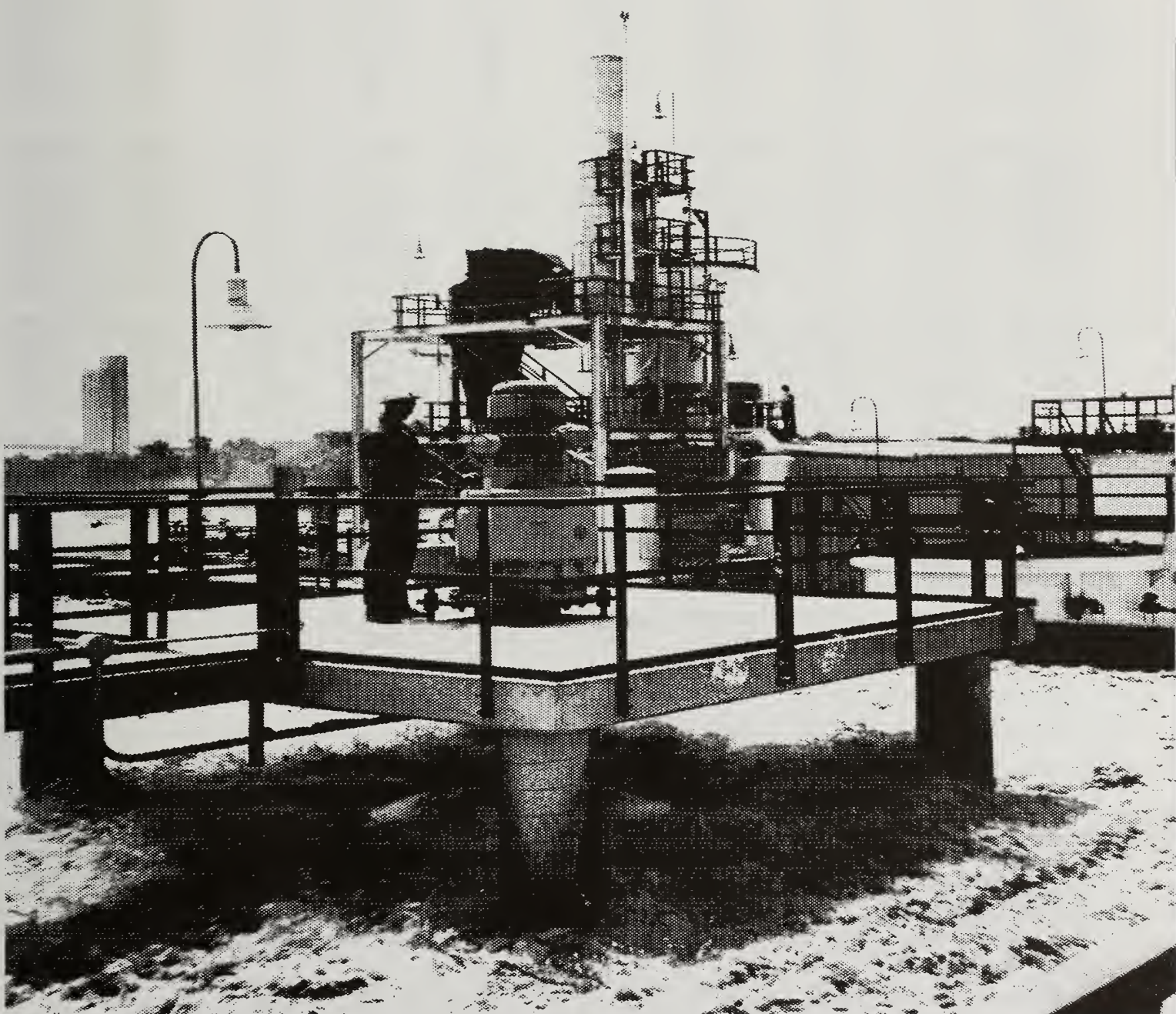


## Note 24. Motor Gasoline Blending Plants Operating During 1999

BP Amoco PLC Forest View, IL Milwaukee, WI	Equilon Enterprises LLC Carteret, NJ Argo, IL Des Plaines, IL Phoenix, AZ St. Louis, MO Tucson, AZ (formerly Clark Refg & Mktg) Milwaukee, WI	Global Petroleum Corp. Revere, MA	Phillips Pipeline Co. Denver, CO
Chevron USA Inc Las Vegas, NV Phoenix, AZ		Hartford/Woodriver Term. Hartford, IL	SFPP LP Eugene, OR Phoenix, AZ Reno, NV Tuscon, AZ
Citgo Petroleum Corp. East Chicago, IN Linden, NJ Milwaukee, WI Mt. Prospect, IL Richmond, VA Selma, NC	ExxonMobil Refg & Supply (formerly Mobil Oil Corp.) Arlington Heights, IL Hammond, IN Lockport, IL	Int'l Matex Tank Term. Bayonne, NJ	
Clark Refg. & Mktg. Inc. Blue Island, IL	GATX Terminals Corp. Carteret, NJ	Itochu International Inc. Sewaren, NJ	Sinclair Oil Corp. Denver, CO
	Getty Terminals Corp. East Providence, RI New Haven, CT Newark, NJ	MarathonAshland Petro LLC Clarksville, IN Covington, KY Hammond, IN Louisville, KY Milwaukee, WI Mt. Prospect, IL Willow Springs, IL	S T Linden Terminal LLC (formerly Northville Corp.) Linden, NJ
			Stolthaven Inc. Perth Amboy, NJ
			Westfrac Inc. Blending Grand Junction, CO

## Appendix C

### 1998 Revised Crude Oil Production



*Surface aerators are used at U.S. petroleum refineries to help prevent water pollution. These aerators speed up the oxidation process by beating air into water.*



## Appendix C

**Table C1. Revised<sup>a</sup> Crude Oil Production by PAD District and State, 1998**  
(Thousand Barrels)

PAD District and State	January	February	March	April	May	June	July
<b>PAD District I.....</b>	<b>791</b>	<b>695</b>	<b>731</b>	<b>755</b>	<b>786</b>	<b>779</b>	<b>794</b>
Florida.....	527	501	484	482	546	535	532
New York.....	17	15	17	19	18	17	20
Pennsylvania.....	105	91	107	110	106	118	124
Virginia.....	1	1	1	2	1	1	1
West Virginia.....	142	87	122	142	115	108	118
<b>PAD District II.....</b>	<b>17,206</b>	<b>15,647</b>	<b>15,617</b>	<b>16,573</b>	<b>16,556</b>	<b>15,326</b>	<b>16,147</b>
Illinois.....	1,295	1,130	1,165	1,155	1,162	1,117	1,135
Indiana.....	197	187	197	188	174	172	190
Kansas.....	3,583	3,246	2,433	3,304	3,131	2,822	3,200
Kentucky.....	283	233	260	253	245	260	257
Michigan.....	830	745	789	804	853	704	766
Missouri.....	11	10	10	11	10	8	11
Nebraska.....	286	269	294	284	291	267	258
North Dakota.....	3,142	2,731	3,040	3,023	3,114	2,977	2,987
Ohio.....	604	570	642	589	480	518	538
Oklahoma.....	6,828	6,402	6,653	6,830	6,966	6,363	6,678
South Dakota.....	113	100	106	108	104	99	101
Tennessee.....	35	25	28	24	26	20	25
<b>PAD District III.....</b>	<b>106,007</b>	<b>94,783</b>	<b>104,927</b>	<b>102,287</b>	<b>104,039</b>	<b>99,786</b>	<b>101,097</b>
Alabama.....	1,182	1,028	1,109	1,045	1,000	1,012	1,033
Arkansas.....	746	668	730	707	696	636	677
Louisiana <sup>b</sup> .....	11,210	10,058	11,127	10,654	11,043	11,159	11,677
Mississippi.....	1,986	1,830	2,056	1,927	1,915	1,982	1,897
New Mexico.....	6,354	5,785	6,117	5,918	5,957	5,525	5,525
Texas <sup>b</sup> .....	45,973	41,370	45,204	43,082	43,826	41,704	41,854
Federal Offshore Padd III.....	38,557	34,046	38,585	38,953	39,602	37,769	38,434
<b>PAD District IV.....</b>	<b>10,995</b>	<b>9,936</b>	<b>10,915</b>	<b>10,460</b>	<b>10,645</b>	<b>10,206</b>	<b>10,357</b>
Colorado.....	2,038	1,858	2,032	1,936	1,960	1,839	1,858
Montana.....	1,396	1,276	1,410	1,445	1,486	1,393	1,416
Utah.....	1,691	1,548	1,719	1,548	1,549	1,617	1,626
Wyoming.....	5,871	5,254	5,754	5,531	5,651	5,356	5,456
<b>PAD District V.....</b>	<b>67,687</b>	<b>60,414</b>	<b>66,581</b>	<b>63,828</b>	<b>65,346</b>	<b>61,893</b>	<b>64,495</b>
Alaska <sup>b</sup> .....	38,538	35,062	38,285	36,426	36,796	34,439	36,233
South Alaska.....	1,019	885	986	951	1,004	1,007	1,016
North Slope.....	37,519	34,177	37,299	35,476	35,792	33,432	35,217
Arizona.....	6	5	5	5	6	6	7
California <sup>b</sup> .....	24,733	21,488	24,223	23,693	24,447	23,545	24,235
Nevada.....	69	64	72	66	65	62	67
Federal Offshore Padd V.....	4,342	3,795	3,995	3,638	4,031	3,841	3,953
<b>U.S. Total<sup>b</sup>.....</b>	<b>202,687</b>	<b>181,475</b>	<b>198,771</b>	<b>193,903</b>	<b>197,373</b>	<b>187,989</b>	<b>192,890</b>
<b>Daily Average<sup>b</sup>.....</b>	<b>6,538</b>	<b>6,481</b>	<b>6,412</b>	<b>6,463</b>	<b>6,367</b>	<b>6,266</b>	<b>6,222</b>

This table contains updates on 1998 crude oil production statistics published in the *Petroleum Supply Annual* (PSA), 1998.

Statistics on crude oil production for States and for Federal offshore areas are reported to the Energy Information Administration (EIA) by State government agencies and by the Minerals Management Service, U.S. Department of the Interior. These data are updated periodically by the reporting agencies and are received by the EIA on an ongoing basis. At the time of publication of the 1998 PSA, the EIA had not received complete and/or updated statistics on crude oil production for several States. This table is provided to inform the user of updated monthly and annual crude oil production statistics for 1998, and are not subject to further revision by the EIA.

**Table C1. Revised<sup>a</sup> Crude Oil Production by PAD District and State, 1998 (Continued)**  
(Thousand Barrels)

PAD District and State	August	September	October	November	December	Total	Daily Average
<b>PAD District I</b> .....	<b>763</b>	<b>724</b>	<b>737</b>	<b>718</b>	<b>709</b>	<b>8,981</b>	<b>25</b>
Florida .....	508	430	465	478	483	5,971	16
New York .....	19	21	20	17	17	217	1
Pennsylvania .....	103	120	119	108	120	1,330	4
Virginia .....	2	(s)	1	1	1	10	(s)
West Virginia .....	131	152	133	114	88	1,453	4
<b>PAD District II</b> .....	<b>15,857</b>	<b>15,219</b>	<b>15,784</b>	<b>14,872</b>	<b>14,546</b>	<b>189,351</b>	<b>519</b>
Illinois .....	1,127	1,120	1,113	1,110	1,103	13,732	38
Indiana .....	189	187	183	183	161	2,208	6
Kansas .....	3,136	2,735	3,143	2,774	2,622	36,131	99
Kentucky .....	240	250	237	225	177	2,919	8
Michigan .....	709	671	711	656	662	8,899	24
Missouri .....	9	9	9	8	8	114	(s)
Nebraska .....	257	246	255	237	231	3,174	9
North Dakota .....	2,971	2,850	2,966	2,870	2,896	35,565	97
Ohio .....	490	567	578	511	453	6,541	18
Oklahoma .....	6,604	6,463	6,463	6,185	6,118	78,554	215
South Dakota .....	100	93	95	93	94	1,206	3
Tennessee .....	25	28	29	19	22	306	1
<b>PAD District III</b> .....	<b>102,141</b>	<b>86,680</b>	<b>97,036</b>	<b>94,014</b>	<b>97,635</b>	<b>1,190,433</b>	<b>3,261</b>
Alabama .....	1,046	965	1,017	971	1,002	12,408	34
Arkansas .....	673	628	645	606	585	7,998	22
Louisiana <sup>b</sup> .....	11,244	9,726	10,370	10,500	10,410	129,177	354
Mississippi .....	1,818	1,641	1,683	1,650	1,646	22,031	60
New Mexico .....	5,542	5,486	5,893	5,700	5,470	69,273	190
Texas <sup>b</sup> .....	41,872	40,309	41,294	39,623	39,406	505,516	1,385
Federal Offshore Padd III .....	39,946	27,925	36,134	34,963	39,116	444,029	1,217
<b>PAD District IV</b> .....	<b>10,265</b>	<b>10,013</b>	<b>10,231</b>	<b>9,897</b>	<b>10,039</b>	<b>123,959</b>	<b>340</b>
Colorado .....	1,854	1,779	1,853	1,740	1,711	22,459	62
Montana .....	1,418	1,355	1,286	1,339	1,383	16,603	45
Utah .....	1,622	1,626	1,609	1,533	1,533	19,222	53
Wyoming .....	5,371	5,253	5,483	5,285	5,412	65,676	180
<b>PAD District V</b> .....	<b>63,163</b>	<b>59,186</b>	<b>64,006</b>	<b>61,745</b>	<b>63,099</b>	<b>761,443</b>	<b>2,086</b>
Alaska <sup>b</sup> .....	34,796	32,222	36,521	34,479	35,436	429,232	1,176
South Alaska .....	999	980	1,000	969	987	11,802	32
North Slope .....	33,796	31,241	35,521	33,510	34,448	417,431	1,144
Arizona .....	9	9	8	6	6	78	(s)
California <sup>b</sup> .....	24,380	23,260	23,630	23,578	23,833	285,045	781
Nevada .....	84	63	64	62	61	799	2
Federal Offshore Padd V .....	3,894	3,632	3,784	3,620	3,764	46,289	127
<b>U.S. Total<sup>b</sup></b> .....	<b>192,189</b>	<b>171,822</b>	<b>187,793</b>	<b>181,244</b>	<b>186,029</b>	<b>2,274,166</b>	<b>6,231</b>
<b>Daily Average<sup>b</sup></b> .....	<b>6,200</b>	<b>5,727</b>	<b>6,058</b>	<b>6,041</b>	<b>6,001</b>	<b>6,231</b>	<b>-</b>

<sup>a</sup> Data are based upon revisions received as of April 2000.

<sup>b</sup> Includes the following offshore production (thousand barrels): Alaska: State - 79,843; California: State - 20,959; Louisiana: State - 18,819; Texas: State - 734; U.S. Total, including Federal Offshore -610,673.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: • Totals may not equal sum of components due to independent rounding.

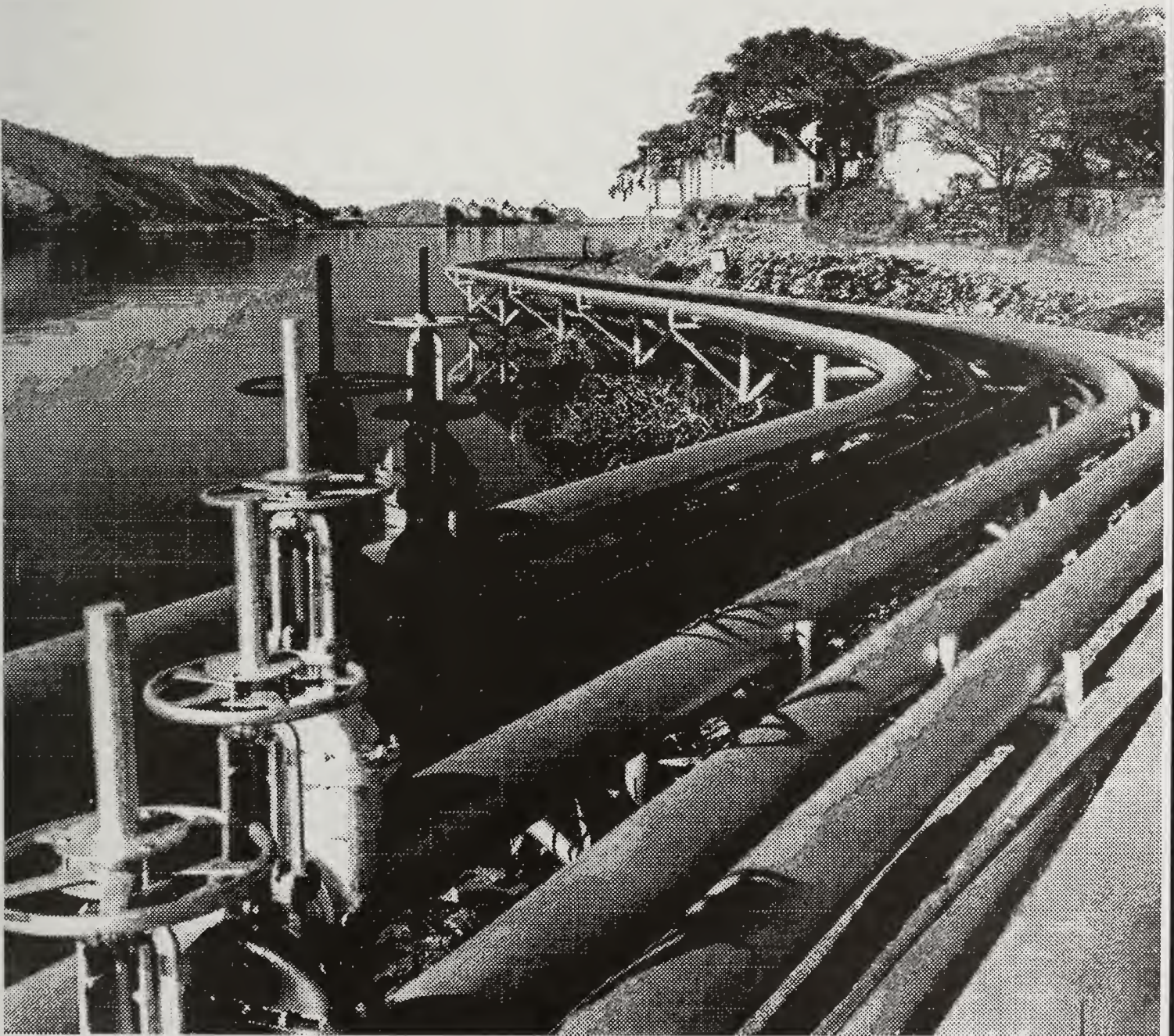
Source: Sources: State government agencies, U.S. Department of the Interior, Minerals Management Service, and EIA Reserves and Production Division estimates based on Form EIA-182, "Domestic Crude Oil First Purchase Report" data.







## Glossary



*Pipelines carry natural gas across geographic regions.*





# Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group;  $\text{CH}_3\text{-(CH}_2\text{)}_n\text{-OH}$  (e.g., methanol, ethanol, and tertiary butyl alcohol).

**Alkylate.** The product of an alkylation reaction. It usually refers to the high octane product from alkylation units. This alkylate is used in blending high octane gasoline.

**Alkylation.** A refining process for chemically combining isobutane with olefin hydrocarbons (e.g., propylene, butylene) through the control of temperature and pressure in the presence of an acid catalyst, usually sulfuric acid or hydrofluoric acid. The product, alkylate, an isoparaffin, has high octane value and is blended with motor and aviation gasoline to improve the antiknock value of the fuel.

**API Gravity.** An arbitrary scale expressing the gravity or density of liquid petroleum products. The measuring scale is calibrated in terms of degrees API; it may be calculated in terms of the following formula:

$$\text{Degrees API} = \frac{141.5}{\text{sp.gr.}_{60^\circ \text{ F}/60^\circ \text{ F}}} - 131.5$$

The higher the API gravity, the lighter the compound. Light crudes generally exceed 38 degrees API and heavy crudes are commonly labeled as all crudes with an API gravity of 22 degrees or below. Intermediate crudes fall in the range of 22 degrees to 38 degrees API gravity.

**Aromatics.** Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics are benzene, toluene, and xylene (BTX).

**Asphalt.** A dark-brown-to-black cement-like material containing bitumens as the predominant constituent obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor for asphalt is 5.5 barrels per short ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Atmospheric Crude Oil Distillation.** The refining process of separating crude oil components at atmospheric pressure by heating to temperatures of about 600° to 750° F (depending on the nature of the crude oil and desired products) and subsequent condensing of the fractions by cooling.

**Aviation Gasoline (Finished).** All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components which will be used in blending or compounding into finished aviation gasoline.

**Aviation Gasoline Blending Components.** Naphthas which will be used for blending or compounding into finished aviation gasoline (e.g., straight-run gasoline, alkylate, reformat, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus. Oxygenates are reported as other hydrocarbons, hydrogen, and oxygenates.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt, still gas and wax to barrels are given in the definitions of these products.

**Barrels Per Calendar Day.** The maximum number of barrels of input that can be processed during a 24-hour period after making allowances for the following limitations:

the capability of downstream facilities to absorb the output of crude oil processing facilities of a given refinery. No reduction is made when a planned distribution of intermediate streams through other than downstream facilities is part of a refinery's normal operation;

the types and grades of inputs to be processed;

the types and grades of products expected to be manufactured;

the environmental constraints associated with refinery operations;

the reduction of capacity for scheduled downtime such as routine inspection, mechanical problems, maintenance, repairs, and turnaround; and



the reduction of capacity for unscheduled downtime such as mechanical problems, repairs, and slowdowns.

**Barrels Per Stream Day.** The amount a unit can process running at full capacity under optimal crude oil and product slate conditions.

**Benzene (C<sub>6</sub>H<sub>6</sub>).** An aromatic hydrocarbon present in small proportion in some crude oils and made commercially from petroleum by the catalytic reforming of naphthenes in petroleum naphtha. Also made from coal in the manufacture of coke. Used as a solvent, in manufacturing detergents, synthetic fibers, and petrochemicals and as a component of high-octane gasoline.

**Blending Components.** See Motor or Aviation Gasoline Blending Components.

**Blending Plant.** A facility which has no refining capability but is either capable of producing finished motor gasoline through mechanical blending or blends oxygenates with motor gasoline.

**Bonded Petroleum Imports.** Petroleum imported and entered into Customs bonded storage. These imports are not included in the import statistics until they are: (1) withdrawn from storage free of duty for use as fuel for vessels and aircraft engaged in international trade; or (2) withdrawn from storage with duty paid for domestic use.

**BTX.** The acronym for the commercial petroleum aromatics benzene, toluene, and xylene. See individual categories for definitions.

**Bulk Station.** A facility used primarily for the storage and/or marketing of petroleum products which has a total bulk storage capacity of less than 50,000 barrels and receives its petroleum products by tank car or truck.

**Bulk Terminal.** A facility used primarily for the storage and/or marketing of petroleum products which has a total bulk storage capacity of 50,000 barrels or more and/or receives petroleum products by tanker, barge, or pipeline.

**Butane (C<sub>4</sub>H<sub>10</sub>).** A normally gaseous straight-chain or branch-chain hydrocarbon extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

**Isobutane (C<sub>4</sub>H<sub>10</sub>).** A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.

**Normal Butane (C<sub>4</sub>H<sub>10</sub>).** A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

**Butylene (C<sub>4</sub>H<sub>8</sub>).** An olefinic hydrocarbon recovered from refinery processes.

**Captive Refinery Oxygenate Plants.** Oxygenate production facilities located within or adjacent to a refinery complex.

**Catalytic Cracking.** The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil. Catalytic cracking processes fresh feeds and recycled feeds.

**Fresh Feeds.** Crude oil or petroleum distillates which are being fed to processing units for the first time.

**Recycled Feeds.** Feeds that are continuously fed back for additional processing.

**Catalytic Hydrocracking.** A refining process that uses hydrogen and catalysts with relatively low temperatures and high pressures for converting middle boiling or residual material to high-octane gasoline, reformer charge stock, jet fuel, and/or high grade fuel oil. The process uses one or more catalysts, depending upon product output, and can handle high sulfur feedstocks without prior desulfurization.

**Catalytic Hydrotreating.** A refining process for treating petroleum fractions from atmospheric or vacuum distillation units (e.g., naphthas, middle distillates, reformer feeds, residual fuel oil, and heavy gas oil) and other petroleum (e.g., cat cracked naphtha, coker naphtha, gas oil, etc.) in the presence of catalysts and substantial quantities of hydrogen. Hydrotreating includes desulfurization, removal of substances (e.g., nitrogen compounds) that deactivate catalysts, conversion of olefins to paraffins to reduce gum formation in gasoline, and other processes to upgrade the quality of the fractions.

**Catalytic Reforming.** A refining process using controlled heat and pressure with catalysts to rearrange certain hydrocarbon molecules, thereby converting paraffinic and naphthenic type hydrocarbons (e.g., low-octane gasoline boiling range fractions) into petrochemical feedstocks and higher octane stocks suitable for blending into finished gasoline. Catalytic reforming is reported in two categories. They are:

**Low Pressure.** A processing unit operating at less than 225 pounds per square inch gauge (PSIG) measured at the outlet separator.

**High Pressure.** A processing unit operating at either equal to or greater than 225 pounds per square inch gauge (PSIG) measured at the outlet separator.

**Charge Capacity.** The input (feed) capacity of the refinery processing facilities.

**Coal.** A black or brownish-black solid combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, subbituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value. Coal rank indicates the progressive alteration, or coalification, from lignite to anthracite. Lignite contains approximately 9 to 17 million BTU per ton. The heat contents of subbituminous and bituminous coal range from 16 to 24 million BTU per ton, and from 19 to 30 million BTU per ton, respectively. Anthracite contains approximately 22 to 28 million BTU per ton.

**Commercial Kerosene-Type Jet Fuel.** See **Kerosene-Type Jet Fuel**.

**Crude Oil (Including Lease Condensate).** A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface-separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign, according to the following:

**Domestic.** Crude oil produced in the United States or from its "outer continental shelf" as defined in 43 USC 1331.

**Foreign.** Crude oil produced outside the United States. Imported Athabasca hydrocarbons (tar sands from Canada) are included.

**Crude Oil, Refinery Receipts.** Receipts of domestic and foreign crude oil at a refinery. Includes all crude oil in transit except crude oil in transit by pipeline. Foreign crude oil is reported as a receipt only after entry through customs. Crude oil of foreign origin held in bonded storage is excluded.

**Crude Oil Losses.** Represents the volume of crude oil reported by petroleum refineries as being lost in their

operations. These losses are due to spills, contamination, fires, etc. as opposed to refinery processing losses.

**Crude Oil Production.** The volume of crude oil produced from oil reservoirs during given periods of time. The amount of such production for a given period is measured as volumes delivered from lease storage tanks (i.e., the point of custody transfer) to pipelines, trucks, or other media for transport to refineries or terminals with adjustments for (1) net differences between opening and closing lease inventories, and (2) basic sediment and water (BS&W).

**Crude Oil Qualities.** Refers to two properties of crude oil, the sulfur content and API gravity, which affect processing complexity and product characteristics.

**Delayed Coking.** A process by which heavier crude oil fractions can be thermally decomposed under conditions of elevated temperatures and pressure to produce a mixture of lighter oils and petroleum coke. The light oils can be processed further in other refinery units to meet product specifications. The coke can be used either as a fuel or in other applications such as the manufacturing of steel or aluminum.

**Disposition.** The components of petroleum disposition are stock change, crude oil losses, refinery inputs, exports, and products supplied for domestic consumption.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils; No. 1, No. 2, and No. 4 diesel fuels. Distillate fuel oil is reported in the following sulfur categories: 0.05% sulfur and under, for use in on-highway diesel engines which could be described as meeting EPA regulations; and greater than 0.05% sulfur, for use in all other distillate applications.

**No. 1 Distillate.** A petroleum distillate which meets the specifications for No. 1 heating or fuel oil as defined in ASTM D 396 and/or the specifications for No. 1 diesel fuel as defined in ASTM Specification D 975 with distillation temperatures of 420° F at the 10-percent recovery point and 550° F at the 90-percent recovery point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100° F.

**No. 2 Distillate.** A petroleum distillate which meets the specifications for No. 2 heating or fuel oil as defined in ASTM D 396 and/or the specifications for No. 2 diesel fuel as defined in ASTM Specification D 975 with distillation temperatures of 540 and 640° F at the 90-



percent recovery point, and kinematic viscosities between 2.0 and 4.3 centistokes at 100° F.

**No. 4 Fuel Oil.** A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D396 or Federal Specification VV-F-815C; with minimum and maximum kinematic viscosities between 5.8 and 26.4 centistokes at 100° F. Also included is No. 4-D, a fuel oil for low and medium-speed diesel engines that conforms to ASTM Specification D975.

**Electricity (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ending Stocks.** Primary stocks of crude oil and petroleum products held in storage as of 12 midnight on the last day of the month. Primary stocks include crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tank farms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in-transit by water from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. Primary Stocks exclude stocks of foreign origin that are held in bonded warehouse storage.

**ETBE (Ethyl tertiary butyl ether) (CH<sub>3</sub>)<sub>3</sub>COC<sub>2</sub>H<sub>5</sub>.** An oxygenate blend stock formed by the catalytic etherification of isobutylene with ethanol.

**Ethane (C<sub>2</sub>H<sub>6</sub>).** A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of -127.48° F. It is extracted from natural gas and refinery gas streams.

**Ether.** A generic term applied to a group of organic chemical compounds composed of carbon, hydrogen, and oxygen, characterized by an oxygen atom attached to two carbon atoms (e.g., methyl tertiary butyl ether).

**Ethylene (C<sub>2</sub>H<sub>4</sub>).** An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

**Exports.** Shipments of crude oil and petroleum products from the 50 States and the District of Columbia to foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, new supply of other hydrocarbons/oxygenates and motor gasoline blending

components, and fuel ethanol blended into finished motor gasoline.

**Flexicoking.** A thermal cracking process which converts heavy hydrocarbons such as crude oil, tar sands bitumen, and distillation residues into light hydrocarbons. Feedstocks can be any pumpable hydrocarbons including those containing high concentrations of sulfur and metals.

**Fluid Coking.** A thermal cracking process utilizing the fluidized-solids technique to remove carbon (coke) for continuous conversion of heavy, low-grade oils into lighter products.

**Fresh Feed Input.** Represents input of material (crude oil, unfinished oils, natural gas liquids, other hydrocarbons and oxygenates or finished products) to processing units at a refinery that is being processed (input) into a particular unit for the first time.

Examples:

(1) Unfinished oils coming out of a crude oil distillation unit which are input into a catalytic cracking unit are considered fresh feed to the catalytic cracking unit.

(2) Unfinished oils coming out of a catalytic cracking unit being looped back into the same catalytic cracking unit to be reprocessed are not considered fresh feed.

**Fuel Ethanol (C<sub>2</sub>H<sub>5</sub>OH).** An anhydrous denatured aliphatic alcohol intended for gasoline blending as described in Oxygenates definition.

**Fuels Solvent Deasphalting.** A refining process for removing asphalt compounds from petroleum fractions, such as reduced crude oil. The recovered stream from this process is used to produce fuel products.

**Gas Oil.** A liquid petroleum distillate having a viscosity intermediate between that of kerosene and lubricating oil. It derives its name from having originally been used in the manufacture of illuminating gas. It is now used to produce distillate fuel oils and gasoline.

**Gasohol.** A blend of finished motor gasoline and alcohol (generally ethanol but sometimes methanol), limited to 10 percent by volume of alcohol.

**Gasoline Blending Components.** Naphthas which will be used for blending or compounding into finished aviation or motor gasoline (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

**Gross Input to Atmospheric Crude Oil Distillation Units.** Total input to atmospheric crude oil distillation units. In-

cludes all crude oil, lease condensate, natural gas plant liquids, unfinished oils, liquefied refinery gases, slop oils, and other liquid hydrocarbons produced from tar sands, gilsonite, and oil shale.

**Heavy Gas Oil.** Petroleum distillates with an approximate boiling range from 651° to 1000° F.

**Hydrogen.** The lightest of all gases, occurring chiefly in combination with oxygen in water; exists also in acids, bases, alcohols, petroleum, and other hydrocarbons.

**Idle Capacity.** The component of operable capacity that is not in operation and not under active repair, but capable of being placed in operation within 30 days; and capacity not in operation but under active repair that can be completed within 90 days.

**Imported Crude Oil Burned As Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. Imported crude oil burned as fuel includes lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale.

**Imports.** Receipts of crude oil and petroleum products into the 50 States and the District of Columbia from foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

**Isobutane.** See **Butane**.

**Isobutylene (C<sub>4</sub>H<sub>8</sub>).** An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

**Isohexane (C<sub>6</sub>H<sub>14</sub>).** A saturated branch-chain hydrocarbon. It is a colorless liquid that boils at a temperature of 156.2° F.

**Isomerization.** A refining process which alters the fundamental arrangement of atoms in the molecule without adding or removing anything from the original material. Used to convert normal butane into isobutane (C<sub>4</sub>), an alkylation process feedstock, and normal pentane and hexane into isopentane (C<sub>5</sub>) and isohexane (C<sub>6</sub>), high-octane gasoline components.

**Isopentane.** See **Natural Gasoline and Isopentane**.

**Kerosene.** A petroleum distillate that has a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters and

is suitable for use as an illuminant when burned in wick lamps.

**Kerosene-Type Jet Fuel.** A quality kerosene product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. The fuel is designated in ASTM Specification D1655 and Military Specifications MIL-T-5624R and MIL-T-83133D (Grades JP-5 and JP-8). A relatively low-freezing point distillate of the kerosene type used primarily for turbojet and turboprop aircraft engines.

**Commercial.** Kerosene-type jet fuel intended for use in commercial aircraft.

**Military.** Kerosene-type jet fuel intended for use in military aircraft.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Light Gas Oils.** Liquid petroleum distillates heavier than naphtha, with an approximate boiling range from 401° F to 650° F.

**Liquefied Petroleum Gases (LPG).** Ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, and isobutylene produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration, they are retained in the liquid state. The reported categories are ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene. Excludes still gas.

**Lower Operational Inventory (LOI).** The lower operational inventory is the lower end of the demonstrated operational inventory range updated for known and definable changes in the petroleum delivery system. While not implying shortages, operational problems, or price increases, the LOI is indicative of a situation where inventory-related supply flexibility could be constrained or nonexistent. The significance of these constraints depends on local refinery capability to meet demand and the availability and deliverability of products from other regions or foreign sources.

**Lubricants.** A substance used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products, or as carriers of other materials. Petroleum lubricants may be produced either



from distillates or residues. Other substances may be added to impart or improve certain required properties. Do not include byproducts of lubricating oil refining such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. "Lubricants" includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Reporting categories include:

**Paraffinic.** Includes all grades of bright stock and neutrals with a Viscosity Index > 75.

**Naphthenic.** Includes all lubricating oil base stocks with a Viscosity Index < 75.

**Note:** The criterion for categorizing the lubricants is based solely on the Viscosity Index of the stocks and is independent of crude sources and type of processing used to produce the oils.

**Exceptions:** Lubricating oil base stocks that have been historically classified as naphthenic or paraffinic by a refiner may continue to be so categorized irrespective of the Viscosity Index criterion.

Example:

(1) Unextracted paraffinic oils that would not meet the Viscosity Index test.

**Merchant Oxygenate Plants.** Oxygenate production facilities that are not associated with a petroleum refinery. Production from these facilities is sold under contract or on the spot market to refiners or other gasoline blenders.

**Methanol (CH<sub>3</sub>OH).** A light, volatile alcohol intended for gasoline blending as described in Oxygenate definition.

**Middle Distillates.** A general classification of refined petroleum products that includes distillate fuel oil and kerosene.

**Military Kerosene-Type Jet Fuel.** See **Kerosene-Type Jet Fuel.**

**Miscellaneous Products.** Includes all finished products not classified elsewhere (e.g., petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils).

**Motor Gasoline (Finished).** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that has been blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as given in ASTM Specification D-4814 or Federal Specification VV-G-1690C, includes a range in

distillation temperatures from 122 degrees to 158 degrees F at the 10-percent recovery point and from 365 degrees to 374 degrees F at the 90-percent recovery point. "Motor gasoline" includes reformulated gasoline, oxygenated gasoline, and other finished gasoline. Blendstock is excluded until blending has been completed.

**Reformulated Gasoline.** Gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211K of the Clean Air Act. Includes oxygenated fuels program reformulated gasoline (OPRG). Excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

**Oxygenated Gasoline.** Gasoline formulated for use in motor vehicles that has an oxygen content of 1.8 percent or higher, by weight. Includes gasohol. Excludes reformulated gasoline, oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB).

**OPRG.** "Oxygenated Fuels Program Reformulated Gasoline" is reformulated gasoline which is intended for use in an oxygenated fuels program control period.

**Other Finished or Conventional Gasoline.** Motor gasoline not included in the oxygenated or reformulated gasoline categories. Excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

**Motor Gasoline Blending.** Mechanical mixing of motor gasoline blending components and oxygenates to produce finished motor gasoline. Mechanical mixing of finished motor gasoline with motor gasoline blending components or oxygenates which results in increased volumes of finished motor gasoline, and/or changes in the classification of finished motor gasoline (e.g., other finished motor gasoline mixed with MTBE to produce oxygenated motor gasoline), is considered motor gasoline blending.

**Motor Gasoline Blending Components.** Naphthas which will be used for blending or compounding into finished motor gasoline (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) and includes reformulated gasoline blendstock for oxygenate blending (RBOB). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus. Oxygenates are reported as individual components and included in the total for other hydrocarbons, hydrogens, and oxygenates.

**MTBE (Methyl tertiary butyl ether) (CH<sub>3</sub>)<sub>3</sub>COCH<sub>3</sub>.** An ether intended for gasoline blending as described in Oxygenate definition.

**Naphtha.** A generic term applied to a petroleum fraction with an approximate boiling range between 122° and 400° F.

**Naphtha Less Than 401° F.** See **Petrochemical Feedstocks.**

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range. ASTM Specification D1655 specifies for this fuel maximum distillation temperatures of 290° F at the 20-percent recovery point and 470° F at the 90-percent point, meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ramjet and petroleum rocket fuels.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, normal butane, pentanes plus, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials and are classified as follows: ethane, propane, normal butane, isobutane, and pentanes plus.

**Natural Gas Processing Plant.** A facility designed (1) to achieve the recovery of natural gas liquids from the stream of natural gas which may or may not have been processed through lease separators and field facilities, and (2) to control the quality of the natural gas to be marketed. Cycling plants are classified as gas processing plants.

**Natural Gasoline and Isopentane.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane which is a saturated branch-chain hydrocarbon, (C<sub>5</sub>H<sub>12</sub>), obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Net Receipts.** The difference between total movements into and total movements out of each PAD District by pipeline, tanker, and barge.

**Normal Butane.** See **Butane.**

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, that have organized for the purpose of negotiating with oil companies on matters of oil production, prices and future concession rights. Current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. The Neutral Zone between Kuwait and Saudi Arabia is considered part of OPEC. Prior to January 1, 1993, Ecuador was a member of OPEC. Prior to January 1995, Gabon was a member of OPEC.

**OPRG.** "Oxygenated Fuels Program Reformulated Gasoline" is reformulated gasoline which is intended for use in an oxygenated fuels program control area during an oxygenated fuels program control period.

**Operable Capacity.** The amount of capacity that, at the beginning of the period, is in operation; not in operation and not under active repair, but capable of being placed in operation within 30 days; or not in operation but under active repair that can be completed within 90 days. Operable capacity is the sum of the operating and idle capacity and is measured in barrels per calendar day or barrels per stream day.

**Operating Capacity.** The component of operable capacity that is in operation at the beginning of the period.

**Operable Utilization Rate.** Represents the utilization of the atmospheric crude oil distillation units. The rate is calculated by dividing the gross input to these units by the operable refining capacity of the units.

**Operating Utilization Rate.** Represents the utilization of the atmospheric crude oil distillation units. The rate is calculated by dividing the gross input to these units by the operating refining capacity of the units.

**Other Finished.** See **Motor Gasoline (Finished).**

**Other Hydrocarbons.** Materials received by a refinery and consumed as a raw material. Includes hydrogen, coal tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Other Oils Equal To or Greater Than 401° F.** See **Petrochemical Feedstocks.**

**Other Oxygenates.** Other aliphatic alcohols and aliphatic ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

**Oxygenated Gasoline.** See **Motor Gasoline (Finished).**



**Oxygenates.** Any substance which, when added to gasoline, increases the amount of oxygen in that gasoline blend. Through a series of waivers and interpretive rules, the Environmental Protection Agency (EPA) has determined the allowable limits for oxygenates in unleaded gasoline. The "Substantially Similar" Interpretive Rules (56 FR (February 11, 1991)) allows blends of aliphatic alcohols other than methanol and aliphatic ethers, provided the oxygen content does not exceed 2.7 percent by weight. The "Substantially Similar" Interpretive Rules also provides for blends of methanol up to 0.3 percent by volume exclusive of other oxygenates, and butanol or alcohols of a higher molecular weight up to 2.75 percent by weight. Individual waivers pertaining to the use of oxygenates in unleaded gasoline have been issued by the EPA. They include:

**Fuel Ethanol.** Blends of up to 10 percent by volume anhydrous ethanol (200 proof) (commonly referred to as the "gasohol waiver").

**Methanol.** Blends of methanol and gasoline-grade tertiary butyl alcohol (GTBA) such that the total oxygen content does not exceed 3.5 percent by weight and the ratio of methanol to GTBA is less than or equal to 1. It is also specified that this blended fuel must meet ASTM volatility specifications (commonly referred to as the "ARCO" waiver).

Blends of up to 5.0 percent by volume methanol with a minimum of 2.5 percent by volume cosolvent alcohols having a carbon number of 4 or less (i.e., ethanol, propanol, butanol, and/or GTBA). The total oxygen must not exceed 3.7 percent by weight, and the blend must meet ASTM volatility specifications as well as phase separation and alcohol purity specifications (commonly referred to as the "DuPont" waiver).

**MTBE (Methyl tertiary butyl ether).** Blends up to 15.0 percent by volume MTBE which must meet the ASTM D4814 specifications. Blenders must take precautions that the blends are not used as base gasolines for other oxygenated blends (commonly referred to as the "Sun" waiver).

**Pentanes Plus.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

**Persian Gulf.** The countries that comprise the Persian Gulf are: Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates.

**Petrochemical Feedstocks.** Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics. The

categories reported are "Naphtha Less Than 401° F" and "Other Oils Equal To or Greater Than 401° F."

**Naphtha Less Than 401° F.** A naphtha with a boiling range of less than 401° F that is intended for use as a petrochemical feedstock.

**Other Oils Equal To or Greater Than 401° F.** Oils with a boiling range equal to or greater than 401° F that are intended for use as a petrochemical feedstock.

**Petroleum Administration for Defense (PAD) Districts.** Geographic aggregations of the 50 States and the District of Columbia into five districts by the Petroleum Administration for Defense in 1950. These districts were originally defined during World War II for purposes of administering oil allocation.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is 5 barrels per short ton.

**Marketable Coke.** Those grades of coke produced in delayed or fluid cokers which may be recovered as relatively pure carbon. This "green" coke may be sold as is or further purified by calcining.

**Catalyst Coke.** In many catalytic operations (e.g., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Pipeline (Petroleum).** Crude oil and product pipelines used to transport crude oil and petroleum products respectively, (including interstate, intrastate, and intracompany pipelines) within the 50 States and the District of Columbia.

**Plant Condensate.** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Processing Gain.** The volumetric amount by which total output is greater than input for a given period of time. This difference is due to the processing of crude oil into products which, in total, have a lower specific gravity than the crude oil processed.

**Processing Loss.** The volumetric amount by which total refinery output is less than input for a given period of time. This difference is due to the processing of crude oil into products which, in total, have a higher specific gravity than the crude oil processed.

**Product Supplied, Crude Oil.** Crude oil burned on leases and by pipelines as fuel.

**Production Capacity.** The maximum amount of product that can be produced from processing facilities.

**Products Supplied.** Approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas processing plants, blending plants, pipelines, and bulk terminals. In general, product supplied of each product in any given period is computed as follows: field production, plus refinery production, plus imports, plus unaccounted for crude oil, (plus net receipts when calculated on a PAD District basis), minus stock change, minus crude oil losses, minus refinery inputs, minus exports.

**Propane (C<sub>3</sub>H<sub>8</sub>).** A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of -43.67° F. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

**Propylene (C<sub>3</sub>H<sub>6</sub>).** An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

**RBOB.** "Reformulated Gasoline Blendstock for Oxygenate Blending" is a motor gasoline blending component which, when blended with a specified type and percentage of oxygenate, meets the definition of reformulated gasoline.

**Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and oxygenates.

**Refinery Input, Crude Oil.** Total crude oil (domestic plus foreign) input to crude oil distillation units and other refinery processing units (cokers, etc.).

**Refinery Input, Total.** The raw materials and intermediate materials processed at refineries to produce finished

petroleum products. They include crude oil, products of natural gas processing plants, unfinished oils, other hydrocarbons and oxygenates, motor gasoline and aviation gasoline blending components and finished petroleum products.

**Refinery Production.** Petroleum products produced at a refinery or blending plant. Published production of these products equals refinery production minus refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. Refinery production of unfinished oils, and motor and aviation gasoline blending components appear on a net basis under refinery input.

**Refinery Yield.** Refinery yield (expressed as a percentage) represents the percent of finished product produced from input of crude oil and net input of unfinished oils. It is calculated by dividing the sum of crude oil and net unfinished input into the individual net production of finished products. Before calculating the yield for finished motor gasoline, the input of natural gas liquids, other hydrocarbons and oxygenates, and net input of motor gasoline blending components must be subtracted from the net production of finished motor gasoline. Before calculating the yield for finished aviation gasoline, input of aviation gasoline blending components must be subtracted from the net production of finished aviation gasoline.

**Reformulated Gasoline.** See **Motor Gasoline (Finished).**

**Residual Fuel Oil.** The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specification D396. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; No. 6, which includes Bunker C fuel oil, and is used for commercial and industrial heating, electricity generation and to power ships.

**Residuum.** Residue from crude oil after distilling off all but the heaviest components, with a boiling range greater than 1000 F.

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades from 0, the most liquid, to 5, the most viscous.

**Shell Storage Capacity.** The design capacity of a petroleum storage tank which is always greater than or equal to working storage capacity.



**Special Naphthas.** All finished products within the naphtha boiling range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specification D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam, purchased for use by a refinery, that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gases produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, propylene, etc. Still gas is used as a refinery fuel and a petrochemical feedstock. The conversion factor is 6 million BTU's per fuel oil equivalent barrel.

**Stock Change.** The difference between stocks at the beginning of the month and stocks at the end of the month.

**Strategic Petroleum Reserve (SPR).** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Sulfur.** A yellowish nonmetallic element, sometimes known as "brimstone".

**Supply.** The components of petroleum supply are field production, refinery production, imports, and net receipts when calculated on a PAD District basis.

**TAME (Tertiary amyl methyl ether)  $(CH_3)_2(C_2H_5)COCH_3$ .** An oxygenate blend stock formed by the catalytic etherification of isoamylene with methanol.

**Tank Farm.** An installation used by gathering and trunk pipeline companies, crude oil producers, and terminal operators (except refineries) to store crude oil.

**Tanker and Barge.** Vessels that transport crude oil or petroleum products. Data are reported for movements between PAD Districts; from a PAD District to the Panama Canal; or from the Panama Canal to a PAD District.

**TBA (Tertiary butyl alcohol)  $(CH_3)_3COH$ .** An alcohol primarily used as a chemical feedstock, a solvent or feedstock for isobutylene production for MTBE; produced as a co-product of propylene oxide production or by direct hydration of isobutylene.

**Thermal Cracking.** A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking includes gas oil, visbreaking, fluid coking, delayed coking, and other thermal cracking processes (e.g., flexicoking). See individual categories for definition.

**Toluene  $(C_6H_5CH_3)$ .** Colorless liquid of the aromatic group of petroleum hydrocarbons, made by the catalytic reforming of petroleum naphthas containing methyl cyclohexane. A high-octane gasoline-blending agent, solvent, and chemical intermediate, base for TNT.

**Unaccounted for Crude Oil.** Represents the arithmetic difference between the calculated supply and the calculated disposition of crude oil. The calculated supply is the sum of crude oil production plus imports minus changes in crude oil stocks. The calculated disposition of crude oil is the sum of crude oil input to refineries, crude oil exports, crude oil burned as fuel, and crude oil losses.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum. See individual categories for definition.

**Unfractionated Streams.** Mixtures of unsegregated natural gas liquid components excluding those in plant condensate. This product is extracted from natural gas.

**United States.** The United States is defined as the 50 States and the District of Columbia.

**Vacuum Distillation.** Distillation under reduced pressure (less the atmospheric) which lowers the boiling temperature of the liquid being distilled. This technique with its relatively low temperatures prevents cracking or decomposition of the charge stock.

**Visbreaking.** A thermal cracking process in which heavy atmospheric or vacuum-still bottoms are cracked at moderate temperatures to increase production of distillate products and reduce viscosity of the distillation residues.

**Wax.** A solid or semi-solid material consisting of a mixture of hydrocarbons obtained or derived from petroleum fractions, or through a Fischer-Tropsch type process, in which the straight chained paraffin series predominates. This includes all marketable wax, whether crude or refined, with a congealing point (ASTM D 938) between 100° and 200° F and a maximum oil content (ASTM D 3235) of 50 weight percent. The conversion factor is 280 pounds per 42 U.S. gallons per barrel.

**Working Storage Capacity.** The difference in volume between the maximum safe fill capacity and the quantity below which pump suction is ineffective (bottoms).

**Xylene ( $C_6H_4(CH_3)_2$ ).** Colorless liquid of the aromatic group of hydrocarbons made the catalytic reforming of

certain naphthenic petroleum fractions. Used as high-octane motor and aviation gasoline blending agents, solvents, chemical intermediates. Isomers are metaxylene, orthoxylene, paraxylene.











# Energy Plug



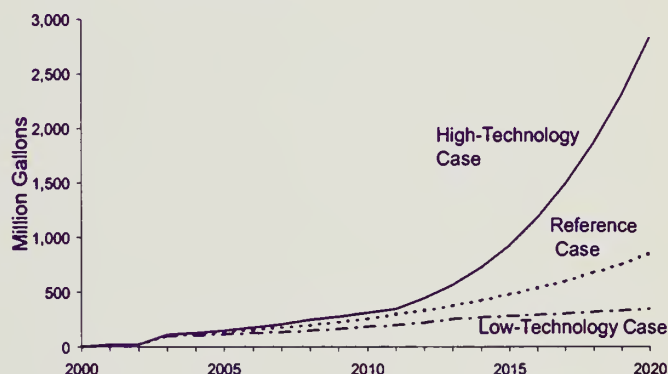
## Outlook for Biomass Ethanol Production and Demand

Fuel ethanol has a long history in the United States and is used extensively as a gasoline volume extender, octane booster, and oxygenate. However, most ethanol is currently made from corn and the process involved has matured to the point that further significant declines in production costs seem unlikely. Ethanol's economic viability as a gasoline blending component also depends in part on Federal and States subsidies, and the Federal subsidy (54 cents per gallon) is slated for slow reduction over the next few years and expiration at the end of 2007.

Ethanol's future might therefore depend on the development of more efficient production technologies. According to the Energy Information Administration's *Outlook for Biomass Ethanol Production and Demand*, exploitation of technologies that replace corn with cellulosic feedstocks—agricultural and forestry wastes, grasses, and certain components of municipal waste, for example—could sharply reduce production costs. Cellulosic ethanol has environmental advantages over corn-based ethanol as well, because its energy balance (the difference between the energy in a gallon of ethanol and the energy required to make that gallon) is significantly higher. On a fuel-cycle basis, this leads to reduced per-mile vehicle emissions of greenhouse gases when the ethanol is blended into vehicle fuel with gasoline.

The report discusses projections of potential biomass ethanol production under three scenarios: a reference case, a low-technology case, and a high-technology case. The reference case assumes use of countercurrent hydrolysis technology and savings of \$0.30 per gallon by 2015 (1998 dollars). In the low-technology case, ethanol is produced from cellulose using sulfuric acid hydrolysis, and process improvements are assumed to yield production cost savings of \$0.16 per gallon by 2015. Enzymatic hydrolysis characterizes the high-technology case; cost savings are assumed to reach \$0.60 per gallon.

Projected Biomass Ethanol Production, 2000-2020



Source: Energy Information Administration.

If the Federal subsidy is extended through 2020, the reference case projects an annual increase in ethanol production of 1.4 percent from 2000 through 2020, with total production reaching 850 million gallons in 2020 (see figure). In the low-technology case, production rises only to 347 million gallons by the end of the forecast period. The high-technology projection is for annual production growth of 30 percent and total production of 2.8 billion gallons in 2020.

The report briefly recounts the historical uses of ethanol in the United States, describes the various technologies involved in the three projection scenarios, and considers the effects on ethanol production if the Federal subsidy were allowed to expire at the end of 2007.

*Outlook for Biomass Ethanol Production and Demand* is available only via the Internet; go to [www.eia.doe.gov](http://www.eia.doe.gov) and click on "Forecasts." Contact [wmaster@eia.doe.gov](mailto:wmaster@eia.doe.gov) or call 202-586-8959 if you have problems. Questions about the report's content should be directed to James Kendell, Office of Integrated Analysis and Forecasting, at [james.kendell@eia.doe.gov](mailto:james.kendell@eia.doe.gov) or 202-586-9646. For general information about energy, contact the National Energy Information Center at [infoctr@eia.doe.gov](mailto:infoctr@eia.doe.gov) or 202-586-8800.



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